

DATE: May 22, 2014

SPECIFICATIONS
Patch, Repair and Resurface Various Streets
Former City of Macon Area
Macon-Bibb County

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Patch, Repair, and Resurface Various Streets
Former City of Macon
Macon-Bibb County
General Conditions

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GENERAL CONDITIONS

ARTICLE 1. DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents the following

terms have the meanings indicated which are applicable to both the singular and plural thereof:

ADDENDA Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

AGREEMENT The written agreement between OWNER and CONTRACTOR covering the Work to be performed: other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

APPLICATION FOR PAYMENT The form accepted by ENGINEER which is to be used by CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

BID The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

BONDS Bid, performance and payment bonds and other instruments of security.

CHANGE ORDER A document recommended by ENGINEER, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.

CONTRACT DOCUMENTS The Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR'S Bid (including documentation accompanying the Bid and any post-Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all amendments, modifications and supplements issued pursuant to paragraphs 3.4 and 3.5 on or after the Effective Date of the Agreement.

CONTRACT PRICE The moneys payable by OWNER to CONTRACTOR under the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.9.1 in the case of Unit Price Work).

CONTRACT TIME The number of days (computed as provided in paragraph 17.2) or the date stated in the Agreement for the completion of the Work.

CONTRACTOR The person, firm or corporation with whom OWNER has entered into the Agreement.

DEFECTIVE An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER'S recommendations of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.8 or 14.10).

DRAWINGS The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by ENGINEER and are referred to in the Contract Documents.

EFFECTIVE DATE OF THE AGREEMENT The date indicated in the Agreement on which is becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

FIELD ORDER A written order issued by ENGINEER which orders minor changes in the Work in accordance with paragraph 9.5 but which does not involve a change in the Contract Price or the Contract Time.

GENERAL REQUIREMENTS Sections of Division 1 of the Specifications.

LAWS AND REGULATIONS; LAWS OR REGULATIONS Laws, rules, regulations, ordinances, codes and/or orders.

NOTICE OF AWARD The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.

NOTICE TO PROCEED A written notice given by the OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR'S obligations under the Contract Documents.

PARTIAL UTILIZATION Placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work.

PROJECT The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

RESIDENT PROJECT REPRESENTATIVE The authorized representative of ENGINEER who is assigned to the site or any part thereof.

SHOP DRAWINGS All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by CONTRACTOR to illustrate material or equipment for some portion of the Work.

SPECIFICATIONS Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

SUBCONTRACTOR An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

SUBSTANTIAL COMPLETION The Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER as evidenced by ENGINEER'S definitive certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if there be no such certificate issued, when final payment is due in accordance with paragraph 14.13. The terms "substantially complete" and "substantially completed" as applied to any Work refer to Substantial Completion thereof.

SUPPLEMENTARY CONDITIONS The part of the Contract Documents which amends or supplements these General Conditions.

SUPPLIER A manufacturer, fabricator, supplier, distributor, material man or vender.

UNDERGROUND FACILITIES All pipelines, conduits, ducts, cables, wire, man holes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

UNIT PRICE WORK Work to be paid for on the basis of unit prices.

WORK The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporation materials and equipment into the construction, all as required by the Contract Documents.

WORK DIRECTIVE CHANGE A written directive to CONTRACTOR, issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER, ordering an addition, deletion or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed as provided in paragraph 4.2 or 4.3 or to emergencies under paragraph 6.22. A Work Directive Change may not change the Contract Price or the Contract Time, but is evidence that the parties expect that the change directed or documented by a Work Directive Change will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Time as provided in paragraph 10.2.

WRITTEN AMENDMENT A written amendment of the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the non-engineering or non-technical rather than strictly Work-related aspects of the Contract Documents.

ARTICLE 2. PRELIMINARY MATTERS

Delivery of Bonds:

- 2.1. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish in accordance with paragraph 5.1.

Copies of Documents:

- 2.2. OWNER shall furnish to CONTRACTOR up to four (4) copies (unless otherwise specified) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

Commencement of Contract Time; Notice to Proceed:

- 2.3. The Contract Time will commence to run on the thirtieth day after the Effective Date of the Agreement, or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within thirty days after the Effective Date of the Agreement. In no event will the Contract Time commence to run

later than the seventy-fifth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier, unless otherwise specified.

Starting the Project:

- 2.4. CONTRACTOR shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.

Before Starting Construction:

- 2.5. Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby.
- 2.6. Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for review:
- 2.6.1. an estimated progress schedule indicating the starting and completion dates of the various stages of the Work;
 - 2.6.2. a preliminary schedule of Shop Drawing submissions; and
 - 2.6.3. a preliminary schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by CONTRACTOR at the time of the submission.
- 2.7. Before any Work at the site is started, CONTRACTOR shall deliver to OWNER, with a copy to ENGINEER, certificates (and other evidence of insurance requested by OWNER) which CONTRACTOR is required to purchase and maintain in accordance with paragraphs 5.3 and 5.4, and OWNER shall deliver to CONTRACTOR certificates (and other evidence of insurance requested by CONTRACTOR) which OWNER is required to purchase and maintain in accordance with paragraphs 5.6 and 5.7.

Pre-construction Conference:

- 2.8. Omitted

Finalizing Schedules:

- 2.9. At least ten days before submission of first Application for Payment a conference attended by CONTRACTOR, ENGINEER and others as appropriate will be held to finalize the schedules submitted in accordance with paragraph 2.6. The finalized progress schedule will be acceptable to ENGINEER as providing an orderly progression of the Work to completion within the Contract Time, but such acceptance will neither impose on ENGINEER responsibility for the progress or scheduling of the Work nor relieve CONTRACTOR from full responsibility there for. The finalized schedule of Shop Drawing submissions will be acceptable to ENGINEER as providing a workable arrangement for processing the submissions. The finalized schedules of values will be acceptable to ENGINEER as to form and substance.

ARTICLE 3. CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

Intent:

- 3.1. The Contract Documents comprise the entire agreement between OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary: what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.
- 3.2. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws or Regulations in effect at the time of opening Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR or ENGINEER, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to ENGINEER, or any of ENGINEER'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.15 or 9.16. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in paragraph 9.4.
- 3.3. If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents. CONTRACTOR shall so report to ENGINEER in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from ENGINEER.

Amending and Supplementing Contract Documents:

- 3.4. The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:
 - 3.4.1. a formal Written Amendment,
 - 3.4.2. a Change Order (pursuant to paragraph 10.4), or
 - 3.4.3. a Work Directive Change (pursuant to paragraph 10.1).

As indicated in paragraphs 11.2 and 12.1, Contract Price and Contract Time may only be changed by a Change Order or a Written Amendment.

- 3.5. In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in one or more of the following ways:
- 3.5.1. a Field Order (pursuant to paragraph 9.5),
 - 3.5.2. ENGINEER'S approval of a Shop Drawing or sample (pursuant to paragraphs 6.26 and 6.27), or
 - 3.5.3. ENGINEER'S written interpretation or clarification (pursuant to paragraph 9.4).

Reuse of Documents:

- 3.6. Neither CONTRACTOR nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER; and they shall not reuse any of them on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaptation by ENGINEER.

ARTICLE 4. AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS

Availability of Lands:

- 4.1. OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR believes that any delay in OWNER'S furnishing these lands, rights-of-way or easements entitles CONTRACTOR to an extension of the Contract Time. CONTRACTOR may make a claim therefore as provided in Article 12. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

Physical Conditions:

- 4.2. Explorations and Reports: Where soil borings, tests, or other information is included in the contract, CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to subsurface conditions at the site.
- 4.2.1. Existing Structures: Reference is made to the drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities referred to in paragraph 4.3) which are at or contiguous to the site that have been utilized by ENGINEER in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such drawings, but not for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in

paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to physical conditions in or relating to such structures.

4.2.2. Report of Differing Conditions: If CONTRACTOR believes that:

4.2.2.1. any technical data on which CONTRACTOR is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is inaccurate, or

4.2.2.2. any physical condition uncovered or revealed at the site differs materially from that indicated, reflected or referred to in the Contract Documents,

CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work in connection therewith (except in an emergency as permitted by paragraph 6.22), notify OWNER and ENGINEER in writing about the inaccuracy or difference.

4.2.3. ENGINEER'S Review: ENGINEER will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise OWNER in writing (with a copy to CONTRACTOR) of ENGINEER'S findings and conclusions.

4.3. Possible Document Change: If ENGINEER concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change in the Contract Documents is required, a Work Directive Change or a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the inaccuracy or difference.

4.4. Possible Price and Time Adjustments: In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to any such inaccuracy or difference. If OWNER and CONTRACTOR are unable to agree as to the amount or length thereof, a claim may be made therefor as provided in Articles 11 and 12.

Physical Conditions - Underground Facilities:

4.5. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in the Contract Documents:

4.5.1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and,

4.5.2. CONTRACTOR shall have full responsibility for reviewing and checking all such information and data, for locating all Underground Facilities shown or indicated in the Contract Documents, for coordination of the Work with the owners of such Underground Facilities during construction, for the safety and protection thereof as provided in paragraph 6.20 and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.

4.6. Not Shown or Indicated. If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of,

CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 6.22), identify the owner of such Underground Facility and give written notice thereof to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 6.20. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any Underground Facility that was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of. If the parties are unable to agree as to the amount or length thereof, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.

Reference Points:

- 4.7. OWNER shall provide engineering surveys to establish reference points for construction which in ENGINEER'S judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work (unless otherwise specified in the General Requirements), shall protect and preserve the established reference points and shall make no changes or relocations without prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

ARTICLE 5. BONDS AND INSURANCE

Performance and Other Bonds:

- 5.1. CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR'S obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as otherwise provided by Law or Regulation or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Special Conditions. All Bonds shall be in the forms prescribed by the Law or Regulation or by the Contract Documents and be executed by such sureties as are amend in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All bonds signed by and agent must be accompanied by a certified copy of authority to act. All payment and performance bonds shall be increased by the amount of any increase in the Contract Price, at the direction of the Owner and/or in compliance with Laws and Regulations.
- 5.2. If the surety on any Bond furnished by CONTRACTOR is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.1.

CONTRACTOR shall within five days thereafter substitute another Bond and Surety, both of which must be acceptable to OWNER.

CONTRACTOR'S Liability Insurance:

5.3. CONTRACTOR shall purchase and maintain such comprehensive general liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR'S performance and furnishing of the Work and CONTRACTOR'S other obligations under the Contract Documents, whether it is to be performed or furnished by CONTRACTOR, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable:

- 5.3.1. Claims under workers' or workmen's compensation, disability benefits and other similar employee benefit acts;
- 5.3.2. Claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR'S employees;
- 5.3.3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR'S employees;
- 5.3.4. Claims for damages insured by personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (b) by any other person for any other reason;
- 5.3.5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom;
- 5.3.6. Claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property; and
- 5.3.7. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

The insurance required by this paragraph 5.3 shall include the specific coverages and be written for not less than the limits of liability and coverages provided in the Special Conditions, or required by law, whichever is greater. The comprehensive general liability insurance shall include completed operations insurance. All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be cancelled, materially changed or renewal refused until at least thirty days' prior written notice has been given to OWNER and ENGINEER by certified mail. All such insurance shall remain in effect until final payment and at all times thereafter when CONTRACTOR may be correcting, removing or replacing defective Work in accordance with paragraph 13.12. In addition, CONTRACTOR shall maintain such completed operations insurance for at least two years after final payment and furnish OWNER with evidence of continuation of such insurance at final payment and one year thereafter.

Contractual Liability Insurance:

- 5.4. The comprehensive general liability insurance required by paragraph 5.3 will include contractual liability insurance applicable to CONTRACTOR'S obligations under paragraphs 6.30 and 6.31.

OWNER'S Liability Insurance:

- 5.5. OWNER will normally be self-insured. Owner may purchase and maintain OWNER'S own liability insurance and, at OWNER'S option, may purchase and maintain such insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.

Property Insurance:

- 5.6. Unless otherwise provided in the Special Conditions, OWNER may purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided in the Special Conditions or required by Laws and Regulations). This insurance may include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER and ENGINEER'S consultants in the Work, all of whom may be listed as insureds or additional insured parties, may insure against the perils of fire and extended coverage and may include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in the Special Conditions, and may include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance or otherwise provided in the Special Conditions, CONTRACTOR shall purchase and maintain similar property insurance on portions of the Work stored on and off site or in transit when such portions of the Work are to be included in an Application for Payment.
- 5.7. OWNER may purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Special Conditions or Laws and Regulations which may include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER and ENGINEER'S consultants in the Work, all of whom may be listed as insured or additional insured parties.
- 5.8. If the OWNER in accordance with paragraphs 5.6 and 5.7 elects to obtain insurance and that insurance is subsequently cancelled or the owner chooses to cancel the insurance, the OWNER will notify CONTRACTOR by certified mail and will contain waiver provisions in accordance with paragraph 5.11.2.
- 5.9. OWNER shall not be responsible for purchasing and maintaining any property insurance to protect the interests of CONTRACTOR, Subcontractors or others in the Work to the extent of any deductible amounts that are provided in the Special Conditions. The risk of loss within the deductible amount will be borne by CONTRACTOR, Subcontractor or others suffering any such loss and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain if at the purchaser's own expense.
- 5.10. If CONTRACTOR requests in writing that other special insurance be included in the property insurance policy, OWNER shall, if possible, include such insurance, and the

cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. Prior to commencement of the Work at the site, OWNER shall in writing advise CONTRACTOR whether or not such other insurance has been procured by OWNER.

Waiver of Rights:

- 5.11. OWNER and CONTRACTOR waive all rights against each other for all losses and damages caused by any of the perils covered by the policies of insurance provided in response to paragraphs 5.6 and 5.7 and any other property insurance applicable to the Work, and also waive all such rights against the Subcontractors, ENGINEER, ENGINEER'S consultants and all other parties named as insureds in such policies for losses and damages so caused. As required by paragraph 6.11, each subcontract between CONTRACTOR and a Subcontractor will contain similar waiver provisions by the Subcontractor in favor of OWNER, CONTRACTOR, ENGINEER, ENGINEER'S consultants and all other parties named as insureds. None of the above waivers shall extend to the rights that any of the insured parties may have to the proceeds of insurance held by OWNER as trustee or otherwise payable under any policy so issued.
- 5.12. OWNER and CONTRACTOR intend that any policies provided in response to paragraphs 5.6 and 5.7 shall protect all of the parties insured and provide primary coverage for all losses and damages caused by the perils covered thereby. Accordingly, all such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any of the parties named as insureds or additional insureds, and if the insurers require separate waiver forms to be signed by ENGINEER or ENGINEER'S consultant OWNER will obtain the same, and if such waiver forms are required of any Subcontractor, CONTRACTOR will obtain the same.

Receipt and Application of Proceeds:

- 5.13. Any insured loss under the policies of insurance required by paragraphs 5.6 and 5.7 will be adjusted with OWNER and made payable to OWNER as trustee for the insureds, as their interest may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.13. OWNER shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof and the Work and the cost thereof by an appropriate Change Order or Written Amendment.
- 5.14. OWNER as trustee shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within fifteen days after the occurrence of loss to OWNER'S exercise of this power. If such objection be made, OWNER as trustee shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If required in writing by any party in interest, OWNER as trustee shall, upon the occurrence of an insured loss, give bond for the proper performance of such duties.

Acceptance of Insurance:

- 5.15. If OWNER has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by CONTRACTOR in accordance

with paragraphs 5.3 and 5.4 on the basis of its not complying with the Contract Documents, OWNER shall notify CONTRACTOR in writing thereof within ten days of the date of delivery of such certificates to OWNER in accordance with paragraph 2.7. CONTRACTOR shall provide to the OWNER such additional information in respect of insurance provided by each as the other may reasonably request. Failure by OWNER to give any such notice of objection within the time provided shall constitute acceptance of such insurance purchased as complying with the Contract Documents.

Partial Utilization - Property Insurance:

- 5.16. If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, such use or occupancy may be accomplished in accordance with paragraph 14.10; provided that no such use or occupancy shall commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected the changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be cancelled or lapse on account of any such partial use or occupancy.

ARTICLE 6. CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendence:

- 6.1. CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.
- 6.2. CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR'S representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to the CONTRACTOR.

Labor, Materials and Equipment:

- 6.3. CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or legal holiday without OWNER'S written consent given after prior notice to ENGINEER.

- 6.4. Unless otherwise specified in the General Requirements, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing start-up and completion of the Work.
- 6.5. All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including report of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed connected, erected, used cleaned and conditioned in accordance with the instruction of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to ENGINEER, or and of ENGINEER'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.15 or 9.16.

Adjusting Progress Schedule:

- 6.6. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.9) adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

Substitutes or "Or-Equal" or "Design Basis" Items:

- 6.7. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by ENGINEER if sufficient information is submitted by CONTRACTOR to allow ENGINEER to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by ENGINEER will include the following as supplemented in the General Requirements. Requests for review of substitute items of material and equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to ENGINEER for acceptance thereof, demonstrating that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice CONTRACTOR'S achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the

application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including cost of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by ENGINEER in evaluating the proposed substitute. ENGINEER may require CONTRACTOR to furnish at CONTRACTOR'S expense additional data about the proposed substitute.

- 6.8. If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents. CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to ENGINEER, if CONTRACTOR submits sufficient information to allow ENGINEER to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in paragraph 6.7.1 as applied by ENGINEER and as may be supplemented in the General Requirements.
- 6.9. ENGINEER will be allowed a reasonable time within which to evaluate each proposed substitute. ENGINEER will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without ENGINEER'S prior written acceptance which will be evidences by either a Change Order or an approved Shop Drawing. OWNER may require CONTRACTOR to furnish at CONTRACTOR'S expense a special performance guarantee or other surety with respect to any substitute. ENGINEER will record time required by ENGINEER and ENGINEER'S consultants in evaluating substitutions proposed by CONTRACTOR and in making changes in the Contract Documents occasioned there by. Whether or not ENGINEER accepts a proposed substitute, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER'S consultants for evaluation each proposed substitute.

Concerning Subcontractors, Suppliers and Others:

- 6.10. CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to OWNER and ENGINEER as indicated in paragraph 6.8.2), whether initially or as a substitute, against whom OWNER or ENGINEER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom the CONTRACTOR has reasonable objection.
- 6.11. If the Contract Documents require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials and equipment) to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Agreement for acceptance by OWNER and ENGINEER and if CONTRACTOR has submitted a list thereof in accordance with the Contract Documents, OWNER'S or ENGINEER'S acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute, the Contract Price will be increased by the difference in the cost occasioned by such substitution and an appropriate Change Order will be issued or

Written Amendment signed. No acceptance by OWNER or ENGINEER of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

- 6.12. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR'S own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.
- 6.13. The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- 6.14. All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER and contains waiver provisions as required by paragraph 5.11. CONTRACTOR shall pay each Subcontractor a just share of any insurance moneys received by CONTRACTOR on account of losses under policies issued pursuant to paragraphs 5.6 and 5.7.

Patent Fees and Royalties:

- 6.15. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. CONTRACTOR shall indemnify and hold harmless OWNER and ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorneys' fees and court and arbitration costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

Permits:

- 6.16. Unless otherwise provided in the Contract Documents, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work,

which are applicable at the time of opening Bids. CONTRACTOR shall pay all charges of utility owners for connections to the Work.

Laws and Regulations:

- 6.17. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR'S compliance with any Laws or Regulations.
- 6.18. If CONTRACTOR observes that the Specifications or Drawings are at variance with any Laws or Regulations, CONTRACTOR shall give ENGINEER prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 3.4. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Laws or Regulations, and without such notice to ENGINEER, CONTRACTOR shall bear all costs arising therefrom; however, it shall not be CONTRACTOR'S primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

Taxes:

- 6.19. CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

Use of Premises:

- 6.20. CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against OWNER or ENGINEER by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and ENGINEER harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against OWNER or ENGINEER to the extent based on a claim arising out of CONTRACTOR'S performance of the Work.
- 6.21. During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

- 6.22. CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

Record Documents:

- 6.23. CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Directive Changes, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during construction. These record documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference.

Safety and Protection:

- 6.24. CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
- 6.24.1. all employees on the Work and other persons and organizations who may be affected thereby;
 - 6.24.2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
 - 6.24.3. other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation or replacement in the course of construction.

CONTRACTOR shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and utility owners when performance of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in paragraph 6.20.2 or 6.20.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR). CONTRACTOR'S duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.13 that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

- 6.25. CONTRACTOR shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be CONTRACTOR'S superintendent unless otherwise designated in writing by CONTRACTOR to OWNER.

Emergencies:

- 6.26. In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from ENGINEER or OWNER, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If ENGINEER determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a Work Directive Change or Change Order will be issued to document the consequences of the changes or variations.

Shop Drawings and Samples:

- 6.27. After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, CONTRACTOR shall submit to ENGINEER for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.9), or for other appropriate action if so indicated in the Contract Documents, four copies (unless otherwise specified in the General Requirements) of all Shop Drawings, which will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as ENGINEER may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable ENGINEER to review the information as required.
- 6.28. CONTRACTOR shall also submit to ENGINEER for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.
- 6.29. Before submission of each Shop Drawing or sample CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with requirements of the Work and the Contract Documents.
- 6.30. At the time of each submission, CONTRACTOR shall give ENGINEER specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to ENGINEER for review and approval of each such variation.

- 6.31. ENGINEER will review and approve with reasonable promptness Shop Drawings and samples, but ENGINEER'S review and approval will be only for conformance with the general design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by ENGINEER, and shall return the required number of corrected copies of Shop Drawings and submit as required new samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.
- 6.32. ENGINEER'S review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER'S attention to each such variation at the time of submission as required by paragraph 6.25.2 and ENGINEER has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for have complied with the provisions of paragraph 6.25.1.
- 6.33. Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to ENGINEER'S review and approval of the pertinent submission will be the sole expense and responsibility of CONTRACTOR.

Continuing the Work:

- 6.34. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.5 or as CONTRACTOR and OWNER may otherwise agree in writing.

Indemnification:

- 6.35. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER and ENGINEER and their consultants, agents, and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of CONTRACTOR, and Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them any be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Law and Regulations regardless of the negligence of any such party.

- 6.36. In any and all claims against OWNER or ENGINEER or any of their consultants, agents or employees by any employee of CONTRACTOR, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.30 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for CONTRACTOR or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.
- 6.37. The obligations of CONTRACTOR under paragraph 6.30 shall not extend to the liability of ENGINEER, ENGINEER'S consultants, agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications.

ARTICLE 7. OTHER WORK

Related Work at Site:

- 7.1. OWNER may perform other work related to the Project at the site by OWNER'S own forces, have other work performed by utility owners or let other direct contracts therefor which may contain General Conditions similar to these. If the fact that such work is to be performed was not noted in the Contract Documents, written notice thereof will be given to CONTRACTOR prior to starting any such other work; and, if CONTRACTOR believes that such performance will involve additional expense to CONTRACTOR or requires additional time and the parties are unable to agree as to the extent thereof, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.
- 7.2. CONTRACTOR shall afford each utility owner and other contractor who is a party to such a direct contract (or OWNER, if OWNER is performing the additional work with OWNER'S employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs, CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.
- 7.3. If any part of CONTRACTOR'S Work depends for proper execution or results upon the work of any such other contractor or utility owner (or OWNER), CONTRACTOR shall inspect and promptly report to ENGINEER in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. CONTRACTOR'S failure so to report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR'S Work except for latent or non-apparent defects and deficiencies in the other work.

Coordination:

- 7.4. If OWNER contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Contract Documents, and the specific matters to be covered by such authority and responsibility will be itemized, and the extent of such authority and responsibilities will be provided, in the Contract Documents. Unless otherwise provided in the Contract Documents, neither OWNER nor ENGINEER shall have any authority or responsibility in respect of such coordination.

ARTICLE 8. OWNER'S RESPONSIBILITIES

- 8.1. OWNER shall issue all communications to CONTRACTOR through ENGINEER.
- 8.2. Omitted
- 8.3. OWNER shall furnish the data required of OWNER under the Contract Documents promptly and shall make payments to CONTRACTOR promptly after they are due as provided in paragraphs 14.4 and 14.13.
- 8.4. OWNER'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER'S identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and in existing structures which have been utilized by ENGINEER in preparing the Drawings and Specifications.
- 8.5. OWNER'S responsibilities in respect of purchasing and maintaining liability and property insurance are set forth in paragraphs 5.5 through 5.8.
- 8.6. OWNER is obligated to execute Change Orders as indicated in paragraph 10.4.
- 8.7. OWNER'S responsibility in respect of certain inspections, tests and approvals is set forth in paragraph 13.4.
- 8.8. In connection with OWNER'S right to stop Work or suspend Work, see paragraphs 13.10 and 15.1. Paragraph 15.2 deals with OWNER'S right to terminate services of CONTRACTOR under certain circumstances.

ARTICLE 9. ENGINEER'S STATUS DURING CONSTRUCTION

OWNER'S Representative:

- 9.1. ENGINEER will be OWNER'S representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER'S representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER and ENGINEER.

Visits to Site:

- 9.2. ENGINEER will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous on-site inspections to

check the quality or quantity of the Work. ENGINEER'S efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and on-site observations as an experienced and qualified design professional, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defects and deficiencies in the Work.

Project Representation:

- 9.3. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in observing the performance of the Work. The duties, responsibilities and limitations of authority of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions. If OWNER designates another agent to represent OWNER at the site who is not ENGINEER'S agent or employee, the duties, responsibilities and limitations of authority of such other person will be as provided in the Contract Document.

Clarifications and Interpretations:

- 9.4. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as ENGINEER may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If CONTRACTOR believes that a written clarification or interpretation justifies an increase in the Contract Price or an extension of the Contract Time and the parties are unable to agree to the amount or extent thereof, CONTRACTOR may make a claim therefor as provided in Article 11 or Article 12.

Authorized Variations in Work:

- 9.5. ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER, and also on CONTRACTOR who shall perform the Work involved promptly. If CONTRACTOR believes that a Field Order justifies an increase in the Contract Price or an extension of the Contract Time and the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a claim therefor as provided in Article 11 or 12.

Rejecting Defective Work:

- 9.6. ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be defective, and will also have authority to require special inspection or testing of the Work as provided in paragraph 13.9, whether or not the Work is fabricated, installed or completed.

Shop Drawings, Change Orders and Payments:

- 9.7. In connection with ENGINEER'S responsibility for Shop Drawings and samples, see paragraphs 6.23 through 6.29 inclusive.
- 9.8. In connection with ENGINEER'S responsibilities as to Change Orders, see Articles 10,11,12.

- 9.9. In connection with ENGINEER'S responsibilities in respect of Applications for Payment, etc., see Article 14.

Determinations for Unit Prices:

- 9.10. ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. ENGINEER will review with CONTRACTOR ENGINEER'S preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). ENGINEER'S written decisions thereon will be final and binding upon OWNER and CONTRACTOR, unless, within ten days after the date of any such decision, either OWNER or CONTRACTOR delivers to the other party to the Agreement and to ENGINEER written notice of intention to appeal from such a decision.

Decisions on Disputes:

- 9.11. ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims under Articles 11 and 12 in respect of changes in the Contract Price or Contract Time will be referred initially to ENGINEER in writing with a request for a formal decision in accordance with this paragraph, which ENGINEER will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter will be delivered by the claimant to ENGINEER and the other party to the Agreement promptly (but in no event later than thirty days) after the occurrence of the event giving rise thereto, and written supporting data will be submitted to ENGINEER and the other party within sixty days after such occurrence unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim.
- 9.12. When functioning as interpreter and judge under paragraphs 9.10 and 9.11, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to paragraphs 9.10 and 9.11 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.16) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such claim, dispute or other matter.

Limitations of ENGINEER'S Responsibilities:

- 9.13. Neither ENGINEER'S authority to act under this Article 9 or elsewhere in the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.
- 9.14. Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved", or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of

ENGINEER as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.15 or 9.16.

- 9.15. ENGINEER will not be responsible for CONTRACTOR'S means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and ENGINEER will not be responsible for CONTRACTOR'S failure to perform or furnish the Work in accordance with the Contract Documents.
- 9.16. ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

ARTICLE 10. CHANGES IN THE WORK

- 10.1. Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by a Written Amendment, a Change Order, or a Work Directive Change. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- 10.2. If OWNER and CONTRACTOR are unable to agree as to the extent, if any, of an increase or decrease in the Contract Price or an extension or shortening of the Contract Time that should be allowed as a result of a Work Directive Change, a claim may be made therefor as provided in Article 11 or Article 12.
- 10.3. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraphs 3.4 and 3.5, except in the case of an emergency as provided in paragraph 6.22 and except in the case of uncovering Work as provided in paragraph 13.9.
- 10.4. OWNER and CONTRACTOR shall execute appropriate Change Orders (or Written Amendments) covering:
 - 10.4.1. changes in the Work which are ordered by OWNER pursuant to paragraph 10.1, are required because of acceptance of defective Work under paragraph 13.13 or correcting defective Work under paragraph 13.14, or are agreed to by the parties.
 - 10.4.2. changes in the Contract Price or Contract Time which are agreed to by the parties; and
 - 10.4.3. changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 9.11;

provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and

adhere to the progress schedule as provided in paragraph 6.29.

- 10.5. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR'S responsibility, and the amount of each applicable Bond will be adjusted accordingly.

ARTICLE 11. CHANGE OF CONTRACT PRICE

- 11.1. The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.
- 11.2. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within sixty days after such occurrence (unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts (direct, indirect and consequential) to which the claimant is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Price shall be determined by ENGINEER in accordance with paragraph 9.11 if OWNER and CONTRACTOR cannot otherwise agree on the amount involved. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this paragraph 11.2.
- 11.3. The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:
- 11.3.1. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraphs 11.9.1, through 11.9.3, inclusive).
- 11.3.2. By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 11.6.2.1).
- 11.3.3. On the basis of the Cost of the Work (determined as provided in paragraphs 11.4 and 11.5) plus a CONTRACTOR'S Fee for overhead and profit (determined as provided in paragraphs 11.6 and 11.7).

Cost of the Work:

- 11.4. The term Cost of the Work means the sum of all cost necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.5:

- 11.4.1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by OWNER.
- 11.4.2. Cost of all materials and equipment furnished and incorporated in the Work, including cost of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.
- 11.4.3. Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to CONTRACTOR and shall deliver such bids of OWNER who will then determine, with the advice of ENGINEER, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as CONTRACTOR'S Cost of the Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.
- 11.4.4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.
- 11.4.5. Supplemental costs including the following:
- 11.4.5.1. The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR'S employees incurred in discharge of duties connected with the Work.
- 11.4.5.2. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

- 11.4.5.3. Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof--all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.
- 11.4.5.4. Sales, consumer, use or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.
- 11.4.5.5. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- 11.4.5.6. Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by CONTRACTOR in connection with the performance and furnishing of the Work (except losses and damages within the deductible amounts of property insurance established by OWNER in accordance with paragraph 5.9), provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR'S Fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid for services a fee proportionate to that stated in paragraph 11.6.2.
- 11.4.5.7. The cost of utilities, fuel and sanitary facilities at the site.
- 11.4.5.8. Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.
- 11.4.5.9. Cost of premiums for additional Bonds and insurance required because of changes in the Work and premiums for property insurance cover age within the limits of the deductible amounts established by OWNER in accordance with paragraph 5.9.

11.5. The term Cost of the Work shall not include any of the following:

- 11.5.1. Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR'S principal or a branch office for general administration of the Work and not specifically included in the

agreed upon schedule of job classifications referred to in paragraph 11.4.1 or specifically covered by 11.4.4--all of which are to be considered administrative costs covered by the CONTRACTOR'S Fee.

- 11.5.2. Expenses of CONTRACTOR'S principal and branch offices other than CONTRACTOR'S office at the site.
- 11.5.3. Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR for delinquent payments.
- 11.5.4. Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 11.4.5.9 above).
- 11.5.5. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.
- 11.5.6. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

CONTRACTOR'S Fee:

- 11.6. The CONTRACTOR'S Fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

- 11.6.1. a mutually acceptable fixed fee; or if none can be agree upon,
- 11.6.2. a fee based on the following percentages of the various portions of the Cost of the Work:
 - 11.6.2.1. for costs incurred under paragraphs 11.4.1 and 11.4.2, the CONTRACTOR'S Fee shall be fifteen percent;
 - 11.6.2.2. for costs incurred under paragraph 11.4.3, the CONTRACTOR'S Fee shall be five percent; and if the subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all Subcontractors shall be fifteen percent;
 - 11.6.2.3. no fee shall be payable on the basis of costs itemized under paragraphs 11.4.4, 11.4.5 and 11.5;
 - 11.6.2.4. the amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR'S Fee by an amount equal to ten percent of the net decrease; and
 - 11.6.2.5. when both additions and credits are involved in any one change, the adjustment in CONTRACTOR'S Fee shall be computed on the basis of the net change in accordance with paragraphs 11.6.2.1 through 11.6.2.4, inclusive.

- 11.7. Whenever the cost of any Work is to be determined pursuant to paragraph 11.4 or 11.5, CONTRACTOR will submit in form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

Cash Allowances:

- 11.8. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers and for such sums within the limit of the allowances as may be acceptable to ENGINEER, CONTRACTOR agrees that:

- 11.8.1. The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and
- 11.8.2. CONTRACTOR'S costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

Unit Price Work:

- 11.9. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER in accordance with Paragraph 9.10.
- 11.10. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR'S overhead and profit for each separately identified item.
- 11.11. Where the quantity of any item of Unit Price Work performed by CONTRACTOR differed materially and significantly from the estimated quantity of such item indicated in the Agreement and there is no corresponding adjustment with respect to any other item of Work and if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof, CONTRACTOR may make a claim for an increase in the Contract Price in accordance with Article 11 if the parties are unable to agree as to the amount of any such increase.

ARTICLE 12. CHANGE OF CONTRACT TIME

- 12.1. The Contract Time may only be changed by a Change Order or a Written Amendment. Any claim for an extension or shortening of the Contract Time shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER

promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within sixty days after such occurrence (unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by ENGINEER in accordance with paragraph 9.11 if OWNER and CONTRACTOR cannot otherwise agree. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph 12.1.

- 12.2. The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if a claim is made therefor as provided in paragraph 12.1. Such delays shall include, but not be limited to, acts or neglect by OWNER or others performing additional work as contemplated by Article 7 or to fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God.
- 12.3. All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 12 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) for delay by either party.

**ARTICLE 13. WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS;
CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK**

Warranty and Guarantee:

- 13.1. CONTRACTOR warrants and guarantees to OWNER and ENGINEER that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to CONTRACTOR. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 13.

Access to Work:

- 13.2. ENGINEER and ENGINEER'S representatives, other representatives or OWNER, testing agencies and governmental agencies with jurisdictional interest will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such access.

Tests and Inspections:

- 13.3. CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests or approvals.
- 13.4. If Laws or Regulations of any public body that have jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved, CONTRACTOR shall assume full responsibility therefor, pay all costs in connection therewith and furnish ENGINEER the required certificates of inspection, testing or approval. CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with OWNER'S or ENGINEER'S acceptance of a Supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to CONTRACTOR'S purchase

thereof for incorporation in the Work. The cost of all inspections, tests and approvals in addition to the above which are required by the Contract Documents shall be paid by OWNER (unless otherwise specific).

- 13.5. All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to OWNER and CONTRACTOR (or by ENGINEER if so specified).
- 13.6. If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation. Such uncovering shall be at CONTRACTOR'S expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR'S intention to cover the same and ENGINEER has not acted with reason able promptness in response to such notice.
- 13.7. Neither observations by ENGINEER nor inspections, test or approvals by others shall relieve CONTRACTOR from CONTRACTOR'S obligations to perform the Work in accordance with the Contract Documents.

Uncovering Work:

- 13.8. If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER'S observation and replaced at CONTRACTOR'S expense.
- 13.9. If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER'S request, shall uncover, expose or otherwise make available for observation, inspection or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, CONTRACTOR shall bear all direct and indirect and consequential costs of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, (including but not limited to fees and charges of engineers, architects, attorneys and other professional), and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, may make a claim therefor as provided in Article 11. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof; CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.

Owner May Stop the Work:

- 13.10. If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

Correction or Removal of Defective Work:

- 13.11. If required by ENGINEER, CONTRACTOR shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by ENGINEER, remove it from the site and replace it with non-defective Work. CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

One Year Correction Period:

- 13.12. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER'S written instructions, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of ENGINEERS, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

Acceptance of Defective Work:

- 13.13. If, instead of requiring correction or removal and replacement of defective Work, OWNER (and, prior to ENGINEER'S recommendation of final payment, also ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall bear all direct, indirect and consequential costs attributable to OWNER'S evaluation of and determination to accept such defective Work (such costs to be approved by ENGINEER as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals). If any such acceptance occurs prior to ENGINEER'S recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

OWNER May Correct Defective Work:

- 13.14. If CONTRACTOR fails within a reasonable time after written notice of ENGINEER to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.11, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy

any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR'S services related thereto, take possession of CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER'S representatives, agents and employees such access to the sites as may be necessary to enable OWNER to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of OWNER in exercising such rights and remedies will be charge against CONTRACTOR in an amount approved as to reasonableness by ENGINEER, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court and arbitration costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR'S defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER'S rights and remedies hereunder.

ARTICLE 14. PAYMENTS TO CONTRACTOR AND COMPLETION

Schedule of Values:

- 14.1. The schedule of values established as provided in paragraph 2.9 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

Application for Progress Payment:

- 14.2. At least twenty days before each progress payment is scheduled (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that OWNER has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect OWNER'S interest there in, all of which will be satisfactory to OWNER. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

CONTRACTOR'S Warranty of Title:

- 14.3. CONTRACTOR warrants and guarantees that title to Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

Review of Applications for Progress Payment:

- 14.4. ENGINEER will, within ten days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing ENGINEER'S reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application. Ten days after presentation of the Application for Payment with ENGINEER'S recommendation, the amount recommended will (subject to the provisions of the last sentence of paragraph 14.7.) become due and when due will be paid by OWNER to CONTRACTOR.
- 14.5. ENGINEER'S recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER'S on-site observations of the Work in progress as an experienced and qualified design professional and on ENGINEER'S review of the Application for Payment and the accompanying data and schedules that the Work has progressed to the point indicated; that, to the best of ENGINEER'S knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.10, and to any other qualifications stated in the recommendation); and that CONTRACTOR is entitled to payment of the amount recommended. However, by recommending any such payment ENGINEER will not thereby be deemed to have represented that exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents or that there might not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or OWNER to withhold payment to CONTRACTOR.
- 14.6. ENGINEER'S recommendation of final payment will constitute an additional representation by ENGINEER to OWNER that the conditions precedent to CONTRACTOR'S being entitled to final payment as set forth in paragraph 14.13 have been fulfilled.
- 14.7. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER'S opinion, it would be incorrect to make such representations to OWNER. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or test, nullify any such payment previously recommended, to such extent as may be necessary in ENGINEER'S opinion to protect OWNER from loss because:
- 14.7.1. the Work is defective, or completed Work has been damaged requiring correction or replacement,

14.7.2. the Contract Price has been reduced by Written Amendment or Change Order,

14.7.3. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.14, or

14.7.4. of ENGINEER'S actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.9 inclusive.

OWNER may refuse to make payment of the full amount recommended by ENGINEER because claims have been made against OWNER on account of CONTRACTOR'S performance or furnishing of the Work or Liens have been filed in connection with the Work or there are other items entitling OWNER to set-off against the amount recommended, but OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action.

Substantial Completion:

14.8. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Within a reasonable time thereafter, OWNER, CONTRACTOR and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the work is not substantially complete, ENGINEER will, within fourteen days after submission of the tentative certificate to OWNER, notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER'S objections, ENGINEER considers the Work substantially complete, ENGINEER will within said fourteen days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities, insurance and warranties. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER prior to ENGINEER'S issuing the definitive certificate of Substantial Completion, ENGINEER'S aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

- 14.9. OWNER shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

Partial Utilization:

- 14.10. Use by OWNER of any finished part of the Work, which has specifically been identified in the Contract Documents, or which OWNER, ENGINEER and CONTRACTOR agree constitutes a separately functioning and useable part of the Work that can be used by OWNER without significant interference with CONTRACTOR'S performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:

14.10.1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER and ENGINEER that said part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraphs 14.8 and 14.9 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

14.10.2. OWNER may at any time request CONTRACTOR in writing to permit OWNER to take over operation of any such part of the Work although it is not substantially complete. A copy of such request will be sent to ENGINEER and within a reasonable time thereafter OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If CONTRACTOR does not object in writing to OWNER and ENGINEER that such part of the Work is not ready for separate operation by OWNER, ENGINEER will finalize the list of items to be completed or corrected and will deliver such list to OWNER and CONTRACTOR together with a written recommendation as to the division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for that part of the Work which will become binding upon OWNER and CONTRACTOR at the time when OWNER takes over such operation (unless they shall have otherwise agreed in writing and so informed ENGINEER). During such operation and prior to Substantial Completion of such part of the

Work, OWNER shall allow CONTRACTOR reasonable access to complete or correct items on said list and to complete other related Work.

- 14.10.3. No occupancy or separate operation of part of the Work will be accomplished prior to compliance with the requirements of paragraph 5.15 in respect of property insurance.

Final Inspection:

- 14.11. Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

Final Application for Payment:

- 14.12. After CONTRACTOR has completed all such corrections to the satisfaction of ENGINEER and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 6.19) and other documents--all as required by the Contract Documents, and after ENGINEER has indicated that the Work is acceptable (subject to the provisions of paragraph 14.16), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER'S property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

Final Payment and Acceptance:

- 14.13. If, on the basis of ENGINEER'S observation of the Work during construction and final inspection, and ENGINEER'S review of the final Application for Payment and accompanying documentation--all as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR'S other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER'S recommendation of payment and present the Application to OWNER for payment. Thereupon ENGINEER will give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.16. Otherwise, ENGINEER will return the Application to CONTRACTOR, indicating in writing the reason for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application. Thirty days after presentation to OWNER of the Application and accompanying documentation, in appropriate form and substance, and with ENGINEER'S recommendation and notice of

acceptability, the amount recommended by ENGINEER will become due and will be paid by OWNER to CONTRACTOR.

- 14.14. If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR'S final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

CONTRACTOR'S Continuing Obligation:

- 14.15. CONTRACTOR'S obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by ENGINEER, nor the issuance of a certificate of Substantial Completion, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor the issuance of a notice of acceptability by ENGINEER pursuant to paragraph 14.13, nor any correction of defective Work by OWNER will constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR'S obligation to perform the Work in accordance with the Contract Documents (except as provided in paragraph 14.16).

Waiver of Claims:

- 14.16. The making and acceptance of final payment will constitute:

- 14.16.1. a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.11 or from failure to comply with the Contract Documents or the terms of any special guarantees specified there in; however, it will not constitute a waiver by OWNER of any rights in respect of CONTRACTOR'S continuing obligations under the Contract Documents; and
- 14.16.2. a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

ARTICLE 15. SUSPENSION OF WORK AND TERMINATION

Owner May Suspend Work:

- 15.1. OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and ENGINEER which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly

attributable to any suspension if CONTRACTOR makes and approved claim therefor as provided in Articles 11 and 12.

Owner May Terminate:

15.2. Upon the occurrence of any one or more of the following events:

- 15.2.1. if CONTRACTOR commences a voluntary case under any chapter of Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;
- 15.2.2. if a petition is filed against CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency;
- 15.2.3. if CONTRACTOR makes a general assignment for the benefit of creditors;
- 15.2.4. if a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR'S creditors;
- 15.2.5. if CONTRACTOR admits in writing an inability to pay its debts generally as they become due;
- 15.2.6. if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents (including, but no limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.9 as revised from time to time);
- 15.2.7. if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;
- 15.2.8. if CONTRACTOR disregards the authority of ENGINEER; or
- 15.2.9. if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR (and the surety, if there be one) seven days' written notice and to the extent permitted by Laws and Regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineer, architects, attorneys and other professionals and court arbitration costs) such excess will be paid to

CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER will be approved as to reasonableness by ENGINEER and incorporated in a Change Order, but when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

- 15.3. Where CONTRACTOR'S services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.
- 15.4. Upon seven days' written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineer, architects, attorneys and other professionals and court and arbitration costs).

Contractor May Stop Work or Terminate:

- 15.5. If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority or ENGINEER fails to act on any Application for Payment within thirty days after it is submitted, or OWNER fail for thirty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and ENGINEER, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if ENGINEER has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may upon seven days' written notice to OWNER and ENGINEER stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of the obligations under paragraph 6.29 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with OWNER.

ARTICLE 16. ARBITRATION (Omitted)

ARTICLE 17. MISCELLANEOUS

Giving Notice:

- 17.1. Whenever any provision of the Contract Documents require the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

Computation of Time:

- 17.2. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of

any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

- 17.3. A calendar day of twenty-four hours measured from midnight to the next midnight shall constitute a day.

General:

- 17.4. Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 17.3 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.
- 17.5. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 6.30, 13.1, 13.12, 13.14, 14.3 and 15.2 and all of the rights and remedies available to OWNER and ENGINEER thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

END OF GENERAL CONDITIONS

SPECIAL CONDITIONS

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(Section SC. 01) ABBREVIATIONS:

ANSI	-	American National Standards Institute
AREA	-	American Railway Engineering Association
ASTM	-	American Society of Testing Materials
ACI	-	American Concrete Institute
AWWA	-	American Water Works Association
AWS	-	American Welding Society
AISI	-	American Iron and Steel Institute
AISC	-	American Institute of Steel Construction
UL	-	Underwriter's Laboratories, Inc.
AASHTO	-	American Association of State Highway & Transportation Official
NEMA	-	National Electrical Manufacturers Association
IEEE	-	Institute of Electrical and Electronic Engineers
ASME	-	American Society of Mechanical Engineers
OSHA	-	Occupational Safety and Health Administration

(Section SC. 02) WORKMEN'S COMPENSATION INSURANCE:

This Contract shall be null and void and of no effect unless the Contractor shall, before entering upon the performance thereof, secure Workmen's Compensation Insurance for the benefit of and keep insured, during the life of said Contract, all employees engaged thereon who are required to be insured by the laws of the State of Georgia. In case the Contractor shall subcontract any portion of the Work, he shall require that all employees of the subcontractor are properly covered by such Workmen's Compensation Insurance.

(Section SC. 03) PUBLIC LIABILITY, PROPERTY DAMAGE, AND AUTOMOBILE INSURANCE:

The Contractor shall take out and maintain during the life of this Contract the various types and amounts of insurance as required to protect the Contractor, the Owner, officials and representatives of the Owner, the Highway Departments, the Consulting Engineers, and their representatives and any subcontractor performing work covered by this Contract from claims for damages for property damages which may arise from operations under this Contract, whether such operations be by himself or by any subcontractor or by anyone directly employed by either of them.

Without restricting the obligations and liabilities assumed under the Contract Documents, the Contractor shall, at his own cost and expense, purchase and maintain in force until final acceptance of this Work, the below listed forms of insurance coverage.

Certificates in triplicate from the insurance carrier stating the limits of liability and expiration date shall be filed with the Owner before operations are begun. Such certificates shall not merely name the types of policy provided, but shall specifically refer to this Contract and shall contain a separate express statement of compliance with each of the requirements as set forth in this Section. However, the original policies for Owner's Protective Liability Insurance (Item C) shall at this time be delivered to the Owner for its possession.

All policies as hereinafter required shall be so written that the Owner will be notified of cancellation or restrictive amendment at least 30 days prior to the effective date of such cancellation or amendment.

- Item A - Workmen's Compensation and Employer's Liability Insurance as required or specified by State Law.
- Item B - Comprehensive General Liability Insurance including coverage for:
 - 1. Property Damage to existing structures and equipment;
 - 2. Direct Operations - including coverage for underground, explosion and collapse hazards;
 - 3. Independent Contractors;
 - 4. Completed Operations;
 - 5. Contractual Liability - Blanket or specific coverage for the indemnification agreement as set forth in the Section titled INDEMNIFICATION.
- Item C - Owner's Protection Liability Insurance - in the name of the Owner including the interest of the Consulting Engineers as additional insureds.
- Item D - Comprehensive Automotive Liability Insurance, including non-ownership and hired car coverage.
- Item E - Builder's Risk and Installation Floater

Builder's Risk: This insurance shall be written in completed value form and shall protect the Contractor, the Owner and the Consulting Engineer, the representatives of the consulting Engineer and the officials and representatives of the Owner against risks of damage to buildings, structures, and materials and equipment, excluding excavation, paving, and related work, not otherwise covered under Installation Floater Insurance, from the perils of fire and lightning, the perils included in the standard extended coverage endorsement, and the perils of vandalism and malicious mischief. The amount of such insurance shall be not less than the insurance value of the Work at completion less the value of materials and equipment insured under Installation Floater Insurance.

Equipment such as pumps, heat exchangers, compressors, tanks, motors, switchgear, transformers, panel boards, control equipment, and other similar equipment shall be

insured under Installation Floater Insurance when the aggregate value of this equipment exceeds \$10,000.

Builder's Risk Insurance shall provide for losses to be payable to the Contractor and the Owner, as their interests may appear.

Installation Floater: This insurance shall protect the Contractor, the Owner, officials and representatives of the Consulting Engineer from all insurable risks to physical loss or damage to materials and equipment not otherwise covered under Builder's Risk Insurance, while in warehouses or storage areas, during installation, during testings, and after the Work is completed. It shall be of the "all risks" type. The coverage shall be for an amount not less than the value of the materials and equipment insured under Builder's Risk Insurance.

Installation Floater Insurance shall provide for losses to be payable to the Contractor and the Owner as their interests may appear.

If the aggregate value of the equipment furnished under the Contract is less than \$10,000, such equipment may be covered under Builder's Risk Insurance and if so covered, this Installation Floater Insurance may be omitted.

Certificates of Insurance covering Installation Floater Insurance shall quote the insuring agreement and all exclusions as they appear in the policy; or in lieu of certificate, copies of the complete policy may be submitted.

Item F - Insurance Required by Others: Such Protective and Contractual Bodily Injury Liabilities Insurance and such Protective and Contractual Property Damage Liability Insurance as shall be required by any public bodies or utility companies whose property, facilities, or right-of-way may be affected by the Work to be done under this Contract.

If any part of the Work is sublet, insurance of the same types and limits as required by above Items A, B, D, and F, shall be provided by or on behalf of the Subcontractor(s) to cover that part of the Work they have contracted to perform.

The minimum limits of liability which will be acceptable for the types of insurance required from the Contractor for this Contract are as follows:

- (a) Bodily Injury \$1,000,000/\$2,000,000
 Property Damage \$500,000/\$1,000,000
- (b) Protective and Contractual Bodily Injury Liability Insurance required by Item F shall be in an amount and form as each utility company may require.
- (c) The Contractor shall take out before the work is commenced within the City's right-of-way, and keep in effect until said work is completed and accepted, liability and property damage insurance holding Macon-Bibb County harmless from any damages arising out of the operation performed

within limits stated above. The insurance policy shall be with an insurance company with a rating of "A" or better and authorized and licensed to do business in the State of Georgia.

A copy of the policy or certificate evidencing same shall be submitted to the Macon-Bibb County Engineer and approved by him before any work is commenced.

(Section SC. 04) INDEMNIFICATION:

The Contractor shall indemnify and hold harmless the Owner, officials and representatives of the Owner, the Georgia Department of Transportation and the Consulting Engineers, and their officers, representatives, agents and employees from and against all claims, damages, losses and expenses, including attorneys' fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss, or expense is caused in whole or in part by any negligent act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

In any and all claims against the Owner, the officials and representatives of the Owner, or the Georgia Department of Transportation or the Consulting Engineer, or any of their officers, representatives, agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them be liable, the indemnification obligation of the Contractor under this Section SC.04 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under Workmen's Compensation Acts, disability benefit acts, or other employee benefit acts.

(Section SC. 05) ASSIGNMENTS:

The Contractor shall not assign, in whole or in part, this contract or any moneys due or to become due thereunder without the written consent of the Owner.

(Section SC. 06) BORING:

Subsurface exploration borings have not been made, unless indicated elsewhere in the contract. If the bidder wishes to make borings for his own use, the Owner will make available the site of the work for such exploratory work. Cost of such work shall be at the bidder's expense.

(Section SC. 07) LINE AND GRADE:

The Owner shall establish as shown on the Contract Drawings, bench marks adjacent to the Work. Based upon the information provided by the Owner, the Contractor shall develop and make all detail surveys necessary for construction, including construction stakes, batter boards, stakes for pile locations and other working points, lines and elevations. The Contractor shall have the responsibility to carefully preserve bench marks, reference points, and stakes, and, in the case of destruction thereof by the Contractor or resulting from his negligence, the Contractor

shall be responsible for any mistakes that may be caused by the unnecessary loss or disturbance of such bench marks, reference points, and stakes.

As location of sewers may change to avoid interference with existing or proposed structures, existing surface profiles may be different than shown on the drawings.

(Section SC. 08) ENVIRONMENTAL REQUIREMENTS:

A. Air Pollution

- (1) Do not burn any material in a manner which violates legal restrictions on such operations.
- (2) Trees, stumps, brush, etc. which must be removed shall become the property of the Contractor including any merchantable timber. Neatly stacked logs may be left of the project site at locations designated by the Engineer. Stumps and brush may be buried outside all structure limits at locations designated by the Engineer.

B. Stream Pollution

Conduct all work in such a manner as to prevent stream siltation.

(Section SC. 09)

Omitted.

(Section SC. 10) TRAFFIC SAFETY:

The Contractor shall provide temporary work signals, signs, warning signs, etc. in accordance with the applicable governing authority. As a minimum the Contractor shall comply with the "Manual on Traffic Control Devices used for Street and Highway Construction and Maintenance Operations", prepared by the Georgia Department of Transportation.

(Section SC. 11) SHOP DRAWINGS:

The Contractor, at his own expense, shall submit for the approval of the Engineer four (4) complete copies of all shop and setting drawings and schedules required for the Work, and no work shall be fabricated by the Contractor, except at his own risk, until such approval has been given. Three sets of drawings furnished by the Contractor will be returned after approval, the other set being retained by the Engineer.

The Contractor shall submit all drawings and schedules sufficiently in advance of construction requirements to allow ample time for checking, correcting, resubmitting, and rechecking; and no claim by the Contractor for delays arising from his failure in this respect will be allowed.

All shop drawings submitted, if not prepared by the Contractor, must bear the stamp of approval of the Contractor as evidence that the drawings have been checked by the Contractor.

Any drawings submitted without this stamp of approval will not be considered and will be returned to the Contractor for resubmission. If the shop drawings have variations from the requirements of the Contract Documents because of standard shop practice or other reasons, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action will be taken for proper adjustment; otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract Documents even though such shop drawings have been approved.

Where the shop drawings as submitted by the Contractor indicate a departure from the Contract which the Engineer deems to be a minor adjustment in the interest of the Owner not involving a change in the Contract Price or extension of time, the Engineer will approve the drawing but the approval will be based on the following understanding:

The modification shown on the attached drawings is approved in the interest of the Owner to effect an improvement for the Project and is accepted with the understanding that it does not involve any change in the Contract Price or time; that it is subject generally to all Contract stipulations and covenants; and that it is without prejudice to any and all rights of the Owner under the Contract and Bond or Bonds.

The approval by the Engineer of shop drawings will be general and shall not relieve the Contractor from the responsibility for adherence to the Contract, nor shall it relieve him of the responsibility for any error which may exist.

(Section SC. 12) WORKING FACILITIES AND EASEMENTS:

The Contractor will be allowed the use of as much of the site designated for the Work as is necessary for his operations, but he must, however, provide all necessary access to any other public or private property, and the cost involved thereby shall be included in the Unit or Lump Sum Prices bid for the various Sections of the Work to be done under this Contract.

Whenever it is required as a part of this Contract to perform work within the limits of private property, easements or in rights-of-way, such work shall be done in conformity with all permits and agreements between the Owner and the owners of such, and whether or not such a condition be part of the agreement, care shall be taken to avoid injury to the premises entered, which premises shall be left in a neat and orderly condition by the removal of rubbish and the grading of surplus materials and the restoration of said private property to the same general conditions as existed at the time of entry for work to be performed under this Contract.

The contractor shall not (except after consent from the proper parties) enter or occupy with men, tools, or equipment, any land outside the rights-of-way or property of the owner.

(Section SC. 13) PROGRAM AND METHOD OF CONSTRUCTION:

The order of sequence of execution of the Work, the methods of construction, the general conduct of the work, and the general arrangement of the Work to be installed shall be, at all times, subject to the approval and direction of the Engineer. If any time before the commencement of, or during the progress of the Work, or any part of it, such methods, features,

and appliances used or to be used appear to the Engineer as unsafe, insufficient, or improper, he may order the Contractor to increase their safety or sufficiency, or to improve their character, and the Contractor shall conform to such orders; but the failure of the Engineer to demand any increase of such safety, sufficiency, adequacy, or any improvement shall not release the Contractor from his obligation to secure the safe conduct and quality of the work specified.

(Section SC. 14) OVERTIME WORK:

No night work or work on Saturdays, Sundays, and legal holidays requiring the presence of an Engineer or Inspector will be permitted except in case of emergency and then only to such an extent as is absolutely necessary and with the written permission of the Engineer. Should it be desired to operate an organization for regular and continuous night work, lighting, safety, and other facilities which are necessary for performing such work at night must be provided by the Contractor at his own cost and expense. This shall not excuse the Contractor from having constant attendance at the Work to be in readiness in time of emergency even to nights, Saturdays, Sundays and holidays. Should the Contractor desire to perform overtime work on this Contract, such shall be done only after approval of the Engineer, and all Resident Engineer and inspection costs must be reimbursed to the Owner by the Contractor as particularized herein.

(Section SC. 15) WORK IN INCLEMENT WEATHER:

The Contractor is presumed to have taken all difficulties due to weather conditions into consideration in preparing his Proposal and in establishing his time for completion of the Work of this Contract. He must be prepared and must take all precautions to protect all work from unfavorable weather and extremes of temperature, whether hot or cold. He shall provide approved facilities for protecting the work finished or in progress to the entire satisfaction of the Engineer. Weather will not be accepted as a justifiable reason for extension of time unless such should be abnormal.

(Section SC. 16) INTOXICATING LIQUORS AND DRUGS:

The Contractor shall neither permit nor suffer the introduction or use of intoxicating liquor nor drugs upon or about the Work specified in this Contract or upon any of the grounds occupied by him or by his employees.

(Section SC. 17) SANITARY MEASURES:

Sanitary conveniences for the use of all persons employed on Work shall be constructed and maintained by the Contractor in sufficient number, in such manner and in such places as shall be required for the project and the placement of such conveniences shall receive prior approval of the Engineer.

All necessary precautions, including the care of employees, shall at all times, be satisfactory to the local Health Department and to that of the City and County. The Contractor shall promptly and fully comply with all orders and regulations in regard to these matters.

(Section SC. 18) WATER SUPPLY:

All water for construction purposes, as well as the expense of having the water conveyed about the Work, shall be provided by the Contractor and the cost of this work shall be included in the Unit or Lump Sum Price bid for the various Items of the Work to be done under this Contract. The source, quality, and quantity of water furnished shall, at all times, be acceptable to all governing agencies and the Engineer.

(Section SC. 19) WATER-TIGHT STRUCTURES:

It is the intention of these Specifications to provide that all concrete work be mixed, deposited, and spaded carefully with the end result of obtaining concrete which is impervious to water. Leakage through concrete structures shall be sufficient reason for requiring the Contractor to uncover or to expose any portion of the Work for a thorough examination by the Engineer, after which said structure shall be repaired and again tested by the Contractor.

(Section SC. 20) MEASURES AND WEIGHTS:

To aid the Engineer in determining all quantities, the Contractor shall, whenever so requested, provide scales, equipment, and assistance for weighing or for measuring any of the materials.

It is understood and agreed that a "ton" shall mean the short ton of two thousand (2,000) pounds.

Weights and measures of quantity for payment shall be the actual weight or actual measure, and no special or trade or so-termed customary allowances will be made, nor will any material which is lost or misplaced be included for payment.

(Section SC. 21) PLANIMETER:

For estimating quantities in which computation of areas by geometric methods would be comparatively laborious, it is agreed that the planimeter shall be considered an instrument of precision adapted to the measurement of such areas.

(Section SC. 22) DIMENSIONS AND ELEVATIONS:

Figured dimensions on drawings shall take precedence over measurement by scale, and detailed working drawings are to take precedence over general drawings and shall be considered as explanatory of them and not as indicating extra work.

The figures given in the Contract and Specifications or upon the Contract Drawings after the word "elevation" or an abbreviation of it, shall mean distances in feet above or below Mean Sea Level.

(Section SC. 23) LIGHTS AND PROTECTION:

The Contractor shall employ watchmen on the Work as necessary and shall, erect and

maintain such strong and suitable barriers and such lights as will effectually prevent the happening of any accident to health, limb, or property. Lights shall be maintained between the hours of one-half hour before sunset and one-half hour after sunrise.

(Section SC. 24) SEWAGE AND WATER FLOWS:

The Contractor shall furnish all the necessary equipment, shall take all necessary precautions and shall assume the entire cost of handling and properly disposing of any water, sewage, seepage, storm, surface, and flood flows which may be encountered at any time during the construction of the Work and in such manner as to not endanger or damage property. The manner of providing for these flows shall meet with the approval of the Engineer and the entire cost of said work shall be included in the Unit or Lump Sum Prices bid for the various Sections of the Work to be done under this Contract.

(Section SC. 25) USE OF STREETS:

During the progress of the Work, the Contractor shall make ample provision for both vehicular and foot traffic on any public road except for the section of road to be closed, and shall indemnify and save harmless the Owner from any expense whatsoever due to his operations over said road ways. The Contractor shall also provide free access to all driveways, fire hydrants, water and gas valves, etc., located along the line of his Work. Gutters and waterways must be kept open or other provisions made for the removal of storm water. Street intersections may be blocked but one-half at a time, and the Contractor shall lay and maintain temporary driveways, bridges, and crossings, such as in the opinion of the Engineer are necessary to reasonably accommodate the public. In the event of the Contractor's failure to comply with these provisions, the Owner may cause the same to be done, and will deduct the cost of such work from any moneys due or to become due the Contractor under this agreement, but the performance of such work by the Owner or at its instance, shall serve in no wise to release the Contractor from his general or particular liability for the safety of the public or of the Work.

No pavement cuts are to be left unfilled overnight, except in emergencies, and in such cases, adequate precautions must be exercised to protect traffic.

(Section SC. 26) OBSTRUCTIONS ENCOUNTERED:

In addition to showing the structures to be built under this Contract, the Drawings show certain information obtained by the Engineer regarding the pipes, pole lines, conduits, and other structures which exist along the lines of the Work, both at and below the surface of the ground. The Engineer and the Owner expressly disclaim any responsibility for the accuracy or completeness of the information given on the Drawings with regard to existing structures, and the Contractor will not be entitled to any extra compensation on account of inaccuracy or incompleteness of such information, said structures being indicated only for the convenience of the Contractor, who must verify the information to his own satisfaction. The giving of this information upon the Contract Drawings will not relieve the Contractor of his obligation to support and protect all pipes, conduits, and other structures which may be encountered during the construction of the Work, and to make good all damages done to such pipes, conduits, and other structures, as provided in these Specifications. The Contractor shall locate all underground

obstructions prior to excavation so as to prevent any damage to those services or other utilities. Any such damages must be repaired without delay and the cost of such repairs must be borne by the Contractor.

(Section SC. 27) CLEANING AND ROUNDING OF STREETS:

As work progresses and before the Work herein specified is accepted, the Contractor shall, upon Notice from the Engineer, thoroughly clean all streets, roads, sidewalks, and lawns free from all debris and dirt accumulating from the construction, shall open all gutters so that free drainage may be had, and on unpaved streets and roads, shall completely round up the entire roadway within the limits of the herein specified Work.

(Section SC. 28) EXISTING CONDUITS, SEWERS, PIPES, AND DRAINS:

The Contractor will be required, at his own expense, to do everything necessary to protect, support, and sustain all sewers, culverts, water, or gas pipes, service pipes, electric lights, power, telephone, or telegraph poles or conduits, and other fixtures laid across or along the site of the Work, even to the extent of using hand labor in making trench openings under or over these. The Owner as well as the company or corporation owning said pipes, poles, or conduits must be notified of the same by the Contractor, before any such fixtures are removed or modified. In case any of the said sewer, gas, or water pipes, service pipes, electric lights, power, telephone, or telegraph poles or conduits, or other fixtures be damaged, they shall be repaired by the authorities have control of the same, and the expense of said repairs shall be paid by the Contractor or deducted from moneys which are due or to become due said Contractor under this Contract. No underground or overhead facilities encountered shall be disturbed without proper authority from the owner, and then only in such manner as the owner may prescribe and approve.

Should it become necessary to change the position, or permanently or temporarily remove any electric conduits, telephone conduits, water pipes, gas pipes, or other pipes, conduits, or wires in order to clear the structure being built or to permit the Contractor to use a particular method of construction, the Contractor shall cease work if necessary, until satisfactory arrangements shall have been made by the owners of the said pipes, wires, or conduits, to properly care for or relocate the same as necessary to permit the construction work to proceed as required for the proper completion of the Contract. No claims for damages will be allowed the Contractor on account of any delay occasioned thereby. The entire cost of the changes or temporary or permanent removal of such gas, water, electric, telephone or telegraph wires, pipes, or conduits, the cost of moving, removing and/or relocating shall be borne by the Contractor and the cost thereof will be included in the Unit or Lump Sum Prices bid for the various Sections of the Proposal.

Nothing contained herein, shall, however, relieve the Contractor of doing such work at his cost and expense as is specifically included in the Contract Drawings or Specifications as a part of this Contract, such as the supporting and maintaining of all utilities encountered, removing sections of sewers and replacing with cast iron or other pipe, removing, extending and connecting to existing sewers and making changes to water mains as indicated, called for, detailed on the Drawings, or necessary and the cost of repairing any damages caused by him to any of the utilities above enumerated.

(Section SC. 29) PROTECTING EXISTING BUILDINGS AND STRUCTURES:

The Contractor shall, at his own expense, shore up and protect any buildings, bridges, or other public or private structures which may be encountered or endangered in the execution of the Work, and that may not be otherwise provided for, and he shall repair and make good any damages caused to any such property by reason of his operations. No payment will be made for said work or material except that such lumber as the Engineer may order left in place as permanent supports for these structures, shall be paid for as provided in the Specifications.

(Section SC. 30) CONNECTIONS TO EXISTING STRUCTURES:

Where, in the execution of the Work, it is necessary to relocate existing pipes, or provide and install new pipes, the Contractor shall remove all bulkheads or masonry which have been left in place in connections and at other points about the Work, and shall make proper connections, as required, to existing pipe lines and structures at the locations indicated or as necessary for the proper completion of the Work of this Contract. Also, he shall make the necessary connections at the several points in order that, on completion of his Contract, sewage, water, or gas may flow to and through the several pipes and appurtenances. No extra payment will be made for this work, but the entire cost of the same shall be included in the Unit or Lump Sum Prices bid for the various Sections of the work to be done under this Contract.

(Section SC. 31) MONUMENTS AND LANDMARKS:

Monuments or landmarks shall not be harmed or removed by the Contractor or any of his employees without the written consent of the Engineer. Any monument or landmark so removed will be replaced by the Owner at the expense of the Contractor. The cost thereof shall be retained from the moneys due or to become due the Contractor under this Agreement.

(Section SC. 32) AID TO THE INJURED:

The Contractor shall keep in his office ready for immediate use, all articles necessary for giving first aid to the injured. He shall also have standing arrangements for the immediate removal and hospital treatment of any employee who may be injured on the Work.

(Section SC. 33) STORING OF MATERIALS:

All materials and equipment required in the Work may be stored in areas directed by the Engineer, but all such materials, tools, and machinery shall be neatly and compactly piled in such a manner as to cause the least inconvenience to the property owners and the traffic. All fire hydrants must, at all time, be kept free and unobstructed and water and gas shut-off boxes, underground power and telephone line manholes must be left uncovered by such materials.

Materials, tools, and machinery shall not be piled or placed against shade trees unless such trees shall be amply protected against injury. All materials, tools, machinery, etc. stored upon public thoroughfares must be provided with sufficient warning lights at night time to alert traffic of such obstruction.

(Section SC. 34) PROTECTION OF EQUIPMENT:

During and after installation, the Contractor shall furnish and maintain satisfactory protection to all water mains and appurtenances against injury by weather, flooding, or breakage, thereby permitting all work to be left in a perfect condition at the completion of the Contract.

(Section SC. 35) TEMPORARY LIGHT AND HEAT:

The Contractor shall supply all temporary heat and light at his own expense for such period of time and at such temperature as the Engineer may direct for the proper protection and execution of the Work.

(Section SC. 36) ELECTRIC POWER:

The Contractor shall make his own arrangements for electric current or power. No special compensation will be made for cost of obtaining or purchasing but such cost shall be considered as having been included in the Unit or Lump Sum Prices bid for the various Sections of the Work to be done under this Contract.

(Section SC. 37) UNNECESSARY NOISE:

The movement and use of machinery and equipment and the handling of materials and conduct of the Work shall be such as to avoid and eliminate unnecessary noise, dirt, and dust.

(Section SC. 38) EXISTING TREES, SHRUBBERY, AND LAWNS:

When ordered by the Engineer, the Contractor shall dig up, handle, protect, and properly reset hedges, small trees, and shrubbery along the line of, or adjacent to the Work and shall take all reasonable care in this work. If damaged, they shall be replaced.

Except as otherwise permitted by the Engineer, trees shall not be disturbed and shall be protected from damage. Tree roots shall not be mutilated nor shall they be cut except by permission of the Engineer. When permitted to cut tree roots, the ends shall be cut off smooth, without splitting or shattering. The trunks of the trees shall be carefully protected from damage, and if unavoidable damage occurs, the injured portions shall be neatly trimmed and covered with an application of grafting wax. Excavating machinery, cranes, etc., shall be handled with care to prevent damage to shade trees, particularly to overhanging branches, and branches shall not be cut off except by special permission of the Engineer.

All lawns and flower beds contiguous to the Work and such as are damaged by the Contractor, shall be replaced or restored to a condition at least as good as at the time of the commencement of Work. This shall include the furnishing and placing of top soil, fertilizing, seeding, and rolling, all as required to properly replace such lawns and flower beds, and in accordance with the Specifications.

No special compensation will be made for the protecting, replacing, and resetting of existing trees and shrubbery, nor for the replacing of lawns and flower beds, but such cost shall

be considered as having been included in the Unit or Lump Sum Prices bid for the various Sections of Work to be done under this Contract.

(Section SC. 39) CLEANING UP:

On or before the date of the final estimate for the Work, the Contractor shall tear down and remove all temporary structures built by him, shall remove all construction plants used by him, and shall repair and replace all parts of existing embankments, fences, or other structures which were removed or injured by the Contractor's operations or by the employees to the Contractor; shall thoroughly clean cut all sewers, drains, pipes, manholes, inlets and miscellaneous and appurtenant structures of debris from his operations; shall rough grade all spoil areas, and shall remove all rubbish and leave the grounds in a neat and satisfactory condition.

(Section SC. 40) MILL AND SHOP TESTS AND INSPECTION:

Where the Item Specifications call for mill or shop tests, the Contractor shall furnish in triplicate copies of attested manufacturer's certificates showing details of quality or performance sufficient to demonstrate conformity to Contract requirements. Inspection and tests of materials shall be made as required by these Specifications, and the cost thereof shall be considered as having been included in the Unit or Lump Sum Prices bid for the various Sections of Work to be done under this Contract.

(Section SC. 41) INSUFFICIENCY OF SAFETY PRECAUTIONS:

If at any time, in the opinion of the Engineer, the Work is not properly lighted, barricaded, and in all respects safe, both in respect to public travel or adjacent property, public or private, and if under such circumstances the Contractor does not or cannot immediately put the same into proper and approved condition, or if the Contractor or his representative is not upon the ground so that he can be immediately notified of the insufficiency of safety precautions, then the Owner, on recommendation of the Engineer, may put the Work into such a condition that it shall be, in his opinion, in all respects safe. The Contractor shall pay all expenses of such labor and materials as may have been used for this purpose by him or by the Owner. Such action of the Engineer or Owner, or their failure to take such action, shall in no way relieve the Contractor of the entire responsibility for any cost, loss or damage by any party sustained on account of the insufficiency of the safety precautions taken by him or by the Engineer or Owner acting under authority of this Section.

(Section SC. 42) USE OF SEWERS OR STRUCTURES:

The Owner shall have the right to connect any sewer, conduit, pipe line, or structure with the Work and its appurtenances herein described, or to grant permits to make connection therewith, at any time before the Work is finally accepted. The Contractor shall not interfere with the making of such connections, and no extra allowances shall be made to said Contractor on account thereof.

(Section SC. 43) **ADMINISTRATION OF OVERTIME WORK BY RESIDENT ENGINEERING FORCE:**

It is the intent of the Contract that the Contractor provide sufficient work force at all times during normal working hours and days of each week to complete the Work without resort to overtime work. The definition of normal working hours and days is an eight (8) hour day or ten (10) hour day as indicated in the General Requirements, Monday through Friday, trade recognized legal holidays excepted, during a consecutive period as agreed upon in the area of the Work, not counting the lunch period; and the definition of normal work week is the aggregate of the five (5) consecutive eight (8) or ten (10) hour days Monday through Friday inclusive, the same holidays excepted.

No overtime work on normal working days, or work on Saturdays, Sundays, or trade recognized legal holidays requiring the presence of the Engineer or an Inspector will be permitted except in case of emergency, then only to such extent as is absolutely necessary, and with the written permission of the Engineer.

Should the Contractor find it necessary to request permission to work more than the hours specified in the General Requirements in one day, or for a number of days, or to work on Saturdays, Sundays, or trade recognized legal holidays in the area of the Work, the Engineer shall have the right to deduct and retain sufficient sums, from the moneys due on any partial or conditional final payment estimate to cover the payment of additional salaries and overhead for the Engineer and such inspectors as are normally employed on the Work to administer the work of the trade, or trades, actually performing such overtime work. The amount which the Engineer may retain shall be the overtime base pay cost incurred, without benefits, times a factor of 2.0 to include overhead expenses. A minimum of four (4) hour work shall be scheduled for each occurrence.

Such sums of money as are retained by reason of this provision: for payment of overtime base pay will be paid to the employees of the Engineer by the Owner as compensation for overtime work, and the balance of such retainage shall compensate the Engineer for overhead expenses.

The Engineer will furnish the Contractor upon request, the rate of overtime base pay for the Engineer and such inspectors as are normally employed to administer the Work.

(Section SC. 44) **RIGHTS RESERVED:**

The Owner reserves the right to reject any or all bids, to waive informalities and to decide for himself which bid or bids be deemed in the best interest of Macon-Bibb County.

On any contract, where unit prices are required, the right is reserved to increase or decrease the quantities specified, without changing the unit prices bid.

On any unit price contract, minor revisions in grades and alignment after award of the Contract resulting in an increase or decrease in the quantities as listed in the Proposal in no way is just cause for a change in the unit prices bid. Relocation of the lines as may be required for

easement or other purposes in no way effects the unit prices provided the line serves the area and purpose for which it was originally intended.

(Section SC. 45) SOCIAL SECURITY TAX:

The Contractor assumes and is liable for all State and Federal payroll or social security taxes and shall guarantee to hold the Owner harmless in every respect against same.

(Section SC. 46) RESTORATION:

The Contractor shall restore all disturbed areas to original or better condition.

(Section SC. 47) PUBLIC CONVENIENCE AND SAFETY:

The Contractor shall, at all times, conduct the Work in such a manner as to insure the least practicable obstruction to public travel. The convenience of the general public and of the residents along and adjacent to the area of the Work shall be provided for in a satisfactory manner, consistent with the operation and local conditions. "Street Closed" signs shall be placed immediately adjacent to the Work, in a conspicuous position, at such locations as traffic demands. At any time that streets are required to be closed, the Contractor shall notify law enforcement agencies, fire departments, and parties operating emergency vehicles before the street is closed and again as soon as it is opened. Access to fire hydrants and other fire extinguishing equipment shall be provided and maintained at all times.

(Section SC. 48) SELLING OF TIMBER:

The rights to all existing timber will be specified on the contract drawings. However, unless specified otherwise, all timber on private property remains the property of the private property owner while all timber on public property which must be removed to perform the contract will belong to the contractor.

(Section SC. 49) COOPERATION WITH GOVERNMENTAL DEPARTMENTS, PUBLIC UTILITIES, ETC:

The Contractor shall be responsible for making all necessary arrangements with the governmental departments, public utilities, public carriers, service companies and corporations owning or controlling roadways, railways, water, sewer, gas, electrical, telephone, and telegraph facilities such as pavements, tracks, piping, wires, cables, conduits, poles, guys, etc. including incidental structures connected therewith, that are encountered in the Work in order that such items may be properly shored, supported and protected, or the Contractor may relocate them if he so desires. The Contractor shall give all proper notices, shall comply with requirements of such parties in the performance of his work, shall permit entrance of such parties on the Project in order that they may perform their necessary work, and shall pay all charges and fees made by such parties for this work.

The Contractor's attention is called to the fact that there may be delays on the Project due to work to be done by governmental departments, public utilities, and others in repairing or

moving poles, conduits, etc. The Contractor shall cooperate with the above parties, in every way possible, so that the construction can be completed in the least possible time.

The Contractor shall have made himself familiar with all codes, laws, ordinances, and regulations which in any manner affect those engaged or employed in the Work, or material and equipment used in or upon the Work, or in any way affect the conduct of the Work, and no plea of misunderstanding will be considered on account of his ignorance thereof.

END OF SECTION

PART 1 - GENERAL

1.01 STATEMENT OF WORK: This is a general overview of the project. Follow details shown by the specifications and drawings, interpreted in accordance with contract clauses.

- A. Provide all labor, material, plant, equipment, supplies, and coordination required to mill, patch, replace curb and gutter, and overlay asphalt pavements. See the attachments describing streets included in the contract as well as utility adjustment requirements and general notes.
- B. The project is located in various locations in Macon-Bibb County.
- C. Price: Accomplish work shown for the original bid price. This includes special work times for utility outages and repair of damages. The words "at no additional cost to the Government" are implied whether stated or not.

1.02 CONTRACT SITE AND WORK RESTRICTIONS:

- A. Work area is restricted to the area at the construction site. The contractor shall maintain one lane of traffic at all times.

1.03 HOURS OF WORK:

- A. Standard work hours for this project are normal work hours of 8:00 AM to 5:00 PM local time, Monday through Friday. Work must stop on official City-County holidays unless specifically approved in advance.
- B. Alternate Work Hours
 - 1. If the Contractor desires to work another set of standard hours submit written request five (5) workdays before the date desired to work the different standard.
 - 2. To work special hours or days such as to continue paving until dark, request verbal approval from the Engineer at least four hours in advance.
 - 3. The Government reserves the right to refuse these requests. In addition, work requiring inspector presence such as placing concrete may not be possible outside normal hours on short notice. Digging outside of normal hours will normally not be approved.
- C. All references to days mean calendar days unless otherwise noted.

1.04 SUBMITTALS:

- A. General: Provide the following submittals in accordance with instructions found in Section 01300, Submittals and Contractor Furnished Items.

01005 - STATEMENT OF WOP

B. Material Submittals: Omitted.

PART 2 - PRODUCTS - OMITTED

PART 3 - EXECUTION

3.01 COORDINATION: The contractor shall coordinate work between different disciplines.

A. Locations shown are approximate and may be moved if approved by the Engineer.

B. Manufacturers' recommendations and/or requirements, if more stringent than the specifications and drawings, shall be followed at no additional cost to the Government.

Section 01005 Submittals

<u>Para #</u>	<u>Description</u>	<u>Date Required</u>	<u>Inspector Check Mark</u>
1.03 B	Alternate Work Hours	5 days prior	_____

<<<<< END OF SECTION >>>>>

Asphalt Streets in Need of Resurfacing

LMIG 2014

<u>No.</u>	<u>Street Name</u>	<u>Start</u>	<u>End</u>	<u>Length</u> Feet	<u>Width</u> Feet	<u>Patches</u> S.Y.	<u>C&G</u> L.F.	<u>Milling</u> S.Y.
1	Steele St.	Broadway	Waterville Rd.	925.0	20	886.0		
2	Twin Pine Lane	Waverland Dr.	End of Street	600.0	20	246.0		
3	Tredway Pl.	Tredway Dr.	Alandale Dr.	870.0	20	158.0		
4	Karen Dr.	Melton Ave.	Cul-de-sac	1,420.0	19	372.0		
5	Valley Trail	Woodhaven Cir.	Crestline Dr.	1,000.0	18	700.0		
6	Hickory Ridge Dr.	Clairmont Ave.	River Ridge Dr.	850.0	22	272.0		
7	Anthony Terr.	Anthony Rd.	Anthony Cir.	1,870.0	26	503.0	10.0	5,402.0
8	Walker Ave.	Bloomfield Dr.	Bloomfield Rd.	730.0	22	22.0	10.0	
9	Hartness St.	Carlo Ave.	Atwood Dr.	2,100.0	22	1091.0	20.0	5,133.0
10	Swan Dr. (1)	Swan Dr.	Cul-de-sac	300.0	24	918.0		
11	Swan Dr. (2)	Swan Dr.	Cul-de-sac	500.0	24	55.0		
12	Moore Ct.	Moore St.	Fletcher St.	360.0	18	232.0		
13	Dr. Betty Tolbert Way	Riverside Dr.	Williams Lane	320.0	16	258.0		
14	N. Brook Ave.	Baxter Ave.	Forest Ave.	880.0	19	209.0		
15	Sheffield Rd.	Pierce Ave.	Forest Ridge Dr. W.	1,400.0	19	445.0		
16	Stuart Dr.	Malvern Hill Dr.	General Lee Dr.	1,700.0	22	258.0	50.0	
17	Heaton Dr.	Bob-O-Link Dr.	Bob-O-Link Dr.	1,000.0	23	337.0	10.0	
18	South St.	Seventh St.	D.E.	1,150.0	26	-----		
19	North St.	Seventh St.	D.E.	1,130.0	20	656.0		
20	O'Hara Dr. N.	O'Hara Dr. S.	#3000	5,500.0	22	260.0	76.0	13,444.0
21	Lindwood Dr.	Lindsey Dr.	D.E.	2,100.0	22	173.0	30.0	5,133.0
22	Heather's Glenn Dr.	Bloomfield Dr.	D.E.	770.0	23	68.0		
23	Pike St.	Log Cabin Dr.	D.E.	940.0	22	595.0		
24	Green Oak Terr.	Lake Valley Rd.	Forest Hill Rd.	1,300.0	22	644.0	158.0	
25	Jessamine St.	Pine Ave.	Cul-de-sac	750.0	19	166.0		
26	Leaf Ct.	Leaf St.	Cul-de-sac	350.0	22	171.0		
27	Leaf Dr.	Leaf St.	Cul-de-sac	600.0	22	270.0		

Asphalt Streets in Need of Resurfacing
LMIG 2014

28	Sherbrook Ct.	Sherbrook Dr.	Cul-de-sac	380.0	23	78.0	36.0	
29	Regent St.	Shurling Dr.	Shurling Dr.	1000.0	20	22.0		
	Total			32,795.0 6.2 Miles		10,065.0	400.0	29,112.0

Utility Adjustment Requirements

*Milled Pavements will not Require Adjustment

<u>No.</u>	<u>Street Name</u>	<u>Start</u>	<u>End</u>	<u>Round Drain</u>	<u>Square Drain</u>	<u>Round Sanitary</u>	<u>Water Valve</u>	<u>Other</u>
1	Steele St.	Broadway	Waterville Rd.			2		
2	Twin Pine Lane	Waverland Dr.	End of Street					
3	Tredway Pl.	Tredway Dr.	Alandale Dr.					
4	Karen Dr.	Melton Ave.	Cul-de-sac			1	1	
5	Valley Trail	Woodhaven Cir.	Crestline Dr.					
6	Hickory Ridge Dr.	Clairmont Ave.	River Ridge Dr.			3	1	
7	Anthony Terr.	Anthony Rd.	Anthony Cir.	2		5*	1*	
8	Walker Ave.	Bloomfield Dr.	Bloomfield Rd.	2		2		
9	Hartness St.	Carlo Ave.	Atwood Dr.			6*		
10	Swan Dr. (1)	Swan Dr.	Cul-de-sac			1		
11	Swan Dr. (2)	Swan Dr.	Cul-de-sac			2		
12	Moore Ct.	Moore St.	Fletcher St.	1				
13	Dr. Betty Tolbert Way	Riverside Dr.	Williams Lane			1		
14	N. Brook Ave.	Baxter Ave.	Forest Ave.			3		
15	Sheffield Rd.	Pierce Ave.	Forest Ridge Dr. W.			3	2	
16	Stuart Dr.	Malvern Hill Dr.	General Lee Dr.			6		
17	Heaton Dr.	Bob-O-Link Dr.	Bob-O-Link Dr.			3		
18	South St.	Seventh St.	D.E.			1	2	
19	North St.	Seventh St.	D.E.					
20	O'Hara Dr. N.	O'Hara Dr. S.	#3000			13*		
21	Lindwood Dr.	Lindsey Dr.	D.E.			5*		
22	Heather's Glenn Dr.	Bloomfield Dr.	D.E.			1		
23	Pike St.	Log Cabin Dr.	D.E.			1	1	
24	Green Oak Terr.	Lake Valley Rd.	Forest Hill Rd.			6	1	
25	Jessamine St.	Pine Ave.	Cul-de-sac			5	3	
26	Leaf Ct.	Leaf St.	Cul-de-sac			2		
27	Leaf Dr.	Leaf St.	Cul-de-sac			1		

Utility Adjustment Requirements

*Milled Pavements will not Require Adjustment

28	Sherbrook Ct.	Sherbrook Dr.	Cul-de-sac				2	1	
29	Regent St.	Shurling Dr.	Shurling Dr.						
	Total			5	0	75	13		
	Total Raised			5	0	46	12		

General Notes:

1. The contractor shall verify all utility locations prior to construction, by calling the Utility Protection Center.
2. The contractor shall be responsible for furnishing all labor, material; equipment and incidental items needed to provide adequate construction signing, barricades, traffic control devices and other related items for the project area, during the construction period.
3. The contractor shall provide reasonable access to residential, commercial and public properties in the project area. During construction, traffic may be restricted to local traffic, only with approval of the Traffic Engineer.
4. Any surplus excavation shall become the property of the contractor, and disposal shall be the contractor's responsibility at no additional cost.
5. The contractor shall backfill behind replaced curbs as needed.
6. The contractor shall level all disturbed areas with topsoil and hand rake to a uniform appearance.
7. All work shall be done according to the specifications.
8. Contractor shall be paid at unit bid prices only.
9. All patches shall be saw cut, or milled to removed failed material as required, the sub-grade compacted, and installing 5" thick of binder.
10. Patches that require more attention will be cut to the depth as directed by the engineer to remove failed material, the sub-grade compacted to 98% dry density, then GABC installed. The unit bid price shall stay the same. The owner shall pay for the cost of extra GABC used.
11. Thickness of patches may vary.
12. The Macon-Bibb reserves the rights to add or delete any street from this contract.
13. Some streets may have concrete, brick or cobble stone under the existing asphalt.
14. As time is of the essence the contractor agrees to begin work promptly and keep work in progress until completion of said contract.
15. The contractor shall obtain permission for all storage on private property. Materials stored on the city right-of-way must be permitted by the appropriate authority.
16. Thickness of asphalt to be milled may vary. Unit price bid stays the same.
17. Macon-Bibb reserves the rights to require compaction and thickness testing. The city will pay for the cost of the testing, however if testing fails, the contractor shall repair all failed tested material at his expense.
18. The actual quantities may vary. Unit price bid remains the same.
19. The actual numbers of manholes to be adjusted to grade may vary.

PART 1 - GENERAL

1.01 UTILITY OUTAGES: Omitted

1.02 SUBMITTALS:

A. General: Provide the following submittals in accordance with instructions found in Section 01300, Submittals and Contractor Furnished Items.

B. Material Submittals: None required under this section.

1.03 SAFEGUARDING COMMUNICATION FACILITIES: For work that will interfere with buried fiber optics cable, aerial cable, house cable, underground cable, or other communication facilities, notify the utility and the Engineer in writing 14 days before the scheduled construction. Do no work until receiving approval.

PART 2 - PRODUCTS - OMITTED

PART 3 - EXECUTION

3.01 DIGGING/EXCAVATION REQUIREMENTS: The contractor shall determine actual utility locations and quantities at the site by calling the Georgia Utilities Protection Center prior to accomplishing any digging.

A. Damage: The contractor is responsible for any damage to underground structures and utility lines identified on the drawings and any identified and marked in the field as a result of obtaining the utility location. If any underground utility is damaged, notify the utility and the Engineer immediately.

B. Cutting of Roads, Streets, and Paved Parking Areas:

1. Mark, barricade, and illuminate construction work on or near roads or streets which may present a traffic hazard in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). Closures of streets, parking lots, and other traffic areas will not be permitted unless approved by the Engineer after written request 14 days before the scheduled closure.

2. Road cuts shall be backfilled immediately after completion of associated utility work. When the road is reopened, the cut shall be filled with temporary or permanent materials to a smooth condition, or metal plates or other approved methods shall be employed to prevent discomfort or damage to vehicular traffic. Road cuts shall be permanently closed within 5 working days unless approved otherwise by the Engineer. Provide advance signage warning motorists of the condition in accordance with the MUTCD.

3.02 STORAGE AREA: The contractor shall obtain permission for all storage on private property. Materials stored on the county or state right of way must be obtained from the appropriate agency.

3.03 Omitted

01040 – SITE REQUIREMENT

3.04 SITE MAINTENANCE, CLEAN UP, AND RESTORATION

- A. Maintain the work site in a neat, orderly, and safe manner.
- B. Remove scrap, waste, and excess materials promptly. Provide signs, barricades, and lights as required to protect personnel.
- C. Do not allow trash and debris to accumulate and become unsightly. Sweep up and collect in contractor-maintained disposal containers daily. Dispose of collected debris weekly as a minimum.
- D. Store materials on site in a neat and orderly manner.
- E. Restore the project site to its final condition as required by the contract as soon as possible.
- F. Do not open trenches or excavations until material is on-hand or scheduled to arrive within three days. Close excavations or ditches as soon as the work has been placed, inspected, and accepted by the government.

Section 1040 Submittals

<u>Para #</u>	<u>Description</u>	<u>Date Required</u>	Inspector Checklist
3.01 B	Road/Parking Closure Request	14 days prior	_____

<<<<< END OF SECTION >>>>>

PART 1 - GENERAL

1.01 GENERAL:

A. Basic: Provide items requiring drawings, diagrams, certifications, manufacturers' literature, data brochures, technical data, sample requests, forms, and other data as noted under each specification section.

B. Contractor Responsibility: Review, Corrections, or Comments made on the Submittals do not relieve the contractor from compliance with the requirements of the Drawings, Specifications, Addendums, and Contract Documents. By entering into this contract, the contractor agrees that the purpose of submittals is to demonstrate to the Engineer that the contractor understands the design concept and that he demonstrates his understanding by indicating which equipment and material he intends to furnish, install, and use. Review of shop drawing will be general only for basic conformance with the design concept. The Government's review of such drawings, schedules, or cuts shall not relieve the contractor from the responsibility for correcting all errors of any sort contained in the submittals. The contractor is responsible for confirming and correlating all quantities and dimensions; selecting proper fabrication processes, construction methods and installation techniques; coordinating this work with that of all other trades; and performing all work in a safe, workmanlike and satisfactory manner.

1.02 OMITTED:

1.03 SUBMITTAL INSTRUCTIONS: Submittal requirements for each specification section are listed in those respective sections. The following apply to all sections.

A. Material Submittals:

1. Complete Submissions: All items requiring submittals prior to construction activities for each section should be provided at one time unless noted otherwise or logically required. In some instances the specifications may require certain items from one or more specifications sections to be submitted at one time.
2. Submittal Checklist: The contractor shall complete a copy of the checklist provided in the submittals paragraph of each specification section. This checklist shall be provided with each submittal. Submittal information shall be arranged in order to correspond with each checklist.
3. Time: The Contractor shall have approved submittals before ordering any equipment under this contract. If equipment is ordered prior to receiving approval, it will be solely at the Contractor's risk. Under no circumstances will material be installed prior to approval of submittals. There will be no time schedule for providing material submittals unless noted elsewhere in the specifications. The Contractor will be required to manage his materials/equipment lead times and obtain approval in sufficient time to complete the work on schedule. Disapproval of incomplete or unsatisfactory submittals shall not be grounds for contract extensions. Other submittals such as as-builts, test reports, etc., shall be provided as indicated. When the word "prior" is used, it shall generally mean prior to the delivery or installation of the product at the work site or prior to the time in question of the item addressed in the specification.
4. Exceptions: If any material proposed for use on this contract deviates from the specifications, the Contractor shall submit those proposed deviations for approval along with detailed

01300 - SUBMITTALS AND CONTRACTOR FURNISHED ITEMS

justification. All exceptions and deviations shall be described in detail with each product submittal. Cost will not be considered a justification for taking exceptions unless a credit is offered to the Government.

5. Substitutions: Products provided by manufacturers other than those specified as the "design basis" shall be considered substitutions.

a. All features of items submitted as substitutions are implied to be in full compliance with Specifications and Drawings if not specifically noted as "Exceptions."

b. Where a design basis is referenced in Specifications and Drawings, substitutions must meet or exceed the salient features of the design basis as determined by the Engineer. Exceptions to design basis characteristics must be clearly noted as "Exceptions." The contractor must demonstrate that the product substituted is clearly equal or superior to the specified product, or else the request for substitution will be denied.

c. Changes required to accommodate approved substitution shall be made at no additional cost to the Government.

B. Other Submittals: Other submittals such as samples, test results, spare parts, and etc. shall be provided as required by each specifications section. Provide 2 copies of each or an electronic copy unless directed otherwise.

1.04 RETURN AND DISAPPROVAL OF SUBMITTALS: The Engineer will return submittals to the Contractor within 14 days after receipt indicating approval or disapproval. Resubmittal of disapproved submittals shall be accomplished within 14 days after receipt of disapproval. Disapproval shall not be cause for time extension.

1.05 SUPERINTENDENT or MANAGER: When requested, provide name and qualifications for review. Provide the name and contact information of the person who will be the primary contact with the Government on this project until project acceptance.

1.06 TURN-IN OF IDENTIFIED EQUIPMENT, SPARE PARTS, TOOLS, AND OTHER MATERIALS: Items indicated in the Submittals section of each specifications and elsewhere, for turn-in to the Government shall be delivered as directed or in the absence of direction, before prefinal inspection. Obtain receipts from Government employees receiving the materials and deliver them to the Engineer before prefinal inspection.

1.07 AS-BUILT DRAWINGS: Omitted

1.08 PROVIDE EQUIPMENT LIST: Omitted

1.09 FINAL INSPECTION ONLY: If the Engineer elects to have only a final inspection, turn in prefinal inspection submittals before the final inspection.

1.10 PRE-AWARD SUBMITTALS: Submit the following items before award, if directed.

A. Experience: Provide documentation on contractor experience relative to this project. After bid opening, the Government may examine contractor experience. The Contractor and/or named subcontractors shall have been

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regularly engaged in the type work of this project for at least (2) years. Include for each subcontractor the name of the business and the individual responsible for this project.

B. References: Provide the names, addresses and telephone numbers of at least two customers for whom similar projects were performed in the last (two) years.

1.11 PROGRESS SCHEDULES AND REPORTS: Omitted

END OF SECTION

01560 – ENVIRONMENTAL REQUIREMENTS

PART 1 - GENERAL

1.01 GENERAL:

- A. General Scope: This Section provides the requirements necessary to ensure that all construction projects are in environmental compliance. Major environmental program areas which may be affected include natural resources, air quality, underground storage tanks, asbestos, lead-based paint, PCBs, cultural resources, water quality, solid and hazardous wastes, and pollution prevention.
- B. Applicable Regulations and Publications: Comply with all applicable Federal, State of Georgia, any laws and regulations from other states where disposal might occur, and local laws and regulations concerning environmental compliance and pollution prevention.
- C. Ensure all products produced or generated under contract shall meet all stated performance objectives and shall not violate in any manner the environmental requirements of any applicable local, state, or federal entity. Applicable environmental requirements shall include but are not limited to a substance's toxicity, biodegradability, and volatile organic/inorganic compound content.
- D. Macon-Bibb County personnel will conduct no-notice inspections to ensure compliance with all environmental requirements.
- E. Definitions:
 - 1. Engineer-Macon-Bibb County Engineer or his or her designated representative.
 - 2. Inspector-The individual from the Macon-Bibb County Engineering Department designated to perform daily inspection of the contractor's work.
 - 3. Dust - Minute solid particles caused to be suspended by natural forces or by mechanical processes such as, but not limited to, crushing, grinding, milling, drilling, demolishing, shoveling, conveying, covering, bagging, mixing, and sweeping.
 - 4. Open Burning - Any outdoor fire from which the products of combustion are emitted directly into the open air without passing through a stack, chimney or duct.
 - 5. Solid Waste - Defined in CFR 261.2. Examples include garbage, refuse, and other discarded solid material including non-hazardous wastes resulting from industrial, commercial, and agricultural operations.
 - 6. GA EPD - Georgia Environmental Protection Division of the Department of Natural Resources.

1.02 OMITTED

1.03 SUBMITTALS:

- A. General: Provide the submittals in accordance with instructions found in Section 01300, Submittals and Contractor Furnished Items.
- B. Material Submittals: Not required under this section.

01560 – ENVIRONMENTAL REQUIREMENTS

1.04 NOTIFICATIONS:

A. Provide to the Engineer all data specified herein to insure compliance with applicable environmental requirements.

1. Permits: Not Required

2. Other Submittals, Notifications, and Approvals: The following submittals, notifications, and approvals are required to maintain compliance:

a. Solid Waste Disposal: The Contractor shall provide a solid waste disposal plan from the contractor stating how all materials leaving the site shall be disposed of.

(1) The plan shall certify that the Contractor shall dispose of all materials in compliance with all Federal, State of Georgia, and local laws. A senior official of the company shall sign this letter. The plan shall address the disposal of each item addressed in Sections 3.01 and 3.02 as applicable. Non-hazardous solid waste shall be broken down into individual types, i.e., asphalt, concrete, wood, brick, etc.

(2) The plan shall address each landfill to be used. A copy of all landfill permits shall be provided unless the Macon, Wolfe Creek, or Houston County landfills are to be used. The plan shall designate the employee who shall be responsible for verifying that all materials removed from the site are disposed of in accordance with the above referenced laws. The employee shall be an employee of the contractor and shall have authority to act for the contractor. Provide two copies of the Disposal Plan to the Engineer prior to the Pre-construction Conference or 14 calendar days prior to the start of disposal operations if no pre-construction conference is held.

(3) Omitted

(4) Omitted.

(5) After contract work is completed and prior to final payment, the Contractor shall submit a letter of certification signed by a senior official of the company certifying that all materials removed from the site have been disposed of in accordance with all applicable Federal, State, and local laws.

b. Hazardous Waste: See Section 09 97 02 for requirements.

PART 2 - PRODUCTS - OMITTED.

PART 3 - EXECUTION

3.01 DISPOSAL OF WASTE/EXCESS MATERIAL:

A. Omitted.

B. Non-hazardous Solid Waste or Excess Material, except topsoil and suitable fill material, shall be removed from the site daily unless permitted otherwise by the Engineer. Dispose in a manner approved by the US Environmental Protection Agency and the Georgia Department of Natural

01560 – ENVIRONMENTAL REQUIREMENTS

Resources, Environmental Protection Division (EPD). Also comply with applicable local codes and requirements. Equipment/material to be removed from the project but not turned in to the Government is the property of the contractor.

1. Disposal: Use one or more of the following methods to dispose of non-hazardous solid waste.

a. Sanitary Landfill: All solid waste may be disposed of in a sanitary landfill properly licensed by the State of Georgia. If a landfill other than the Macon, Wolfe Creek, or Houston County sanitary landfill is used, provide a copy of the landfill license. Provide proof that any Georgia municipal solid waste disposal facility to which they propose to bring waste, except Macon, Wolfe Creek, or Houston County, is operated by someone who has obtained the certification required by the Georgia Solid Waste Management Act, O.C.G.A. 12-8-24.1.

b. Inert Waste Landfill: Materials not likely to cause production of leachate of environmental concern may be disposed of in an inert waste landfill. Only earth and earth-like products, concrete, cured asphaltic concrete, rock, bricks, yard trimmings, and land clearing debris such as stumps, limbs, and leaves are acceptable for disposal in an inert waste landfill. This definition excludes industrial and demolition waste not specifically listed above. Provide a copy of the written notice of commencement of operation by the landfill as given to the Georgia EPD.

c. Construction/Demolition Disposal Site: Only wood, metal, wallboard, paper, cardboard, as well as materials that can go in an inert waste landfill may be disposed of in this facility. Provide a copy of the landfill license.

d. Recycling: Recycling of materials is strongly encouraged. Materials destined for recycling must meet the definition of non-hazardous wastes under federal/state solid waste regulations. Materials defined as “recovered materials” by GA EPD regulations are excluded from regulation as solid wastes.

e. All materials to be disposed of in other than a sanitary landfill must be kept segregated at the project site from those materials, which are allowed only in a sanitary landfill.

2. Solid Waste Disposal Outside of Georgia: Dispose of no solid waste outside the state of Georgia without prior written approval of the Engineer. If the contractor desires this, he shall provide sufficient information as determined by the Engineer to allow verification

3.02 SPECIAL WASTES OR HAZARDOUS MATERIALS: Not applicable.

3.03 PROTECTION OF LAND RESOURCES:

A. General: Do not take any action which shall adversely affect the existing Water Quality Standards classification of any streams, rivers, lakes or reservoirs within or adjacent to the project site or which would otherwise contribute to pollution of these water resources. No fuel, oils, bituminous, calcium chloride, acids, construction waste or otherwise harmful materials shall be permitted to enter these water resources. Preserve the land resources in their present condition or restore to a condition that appears natural and does not detract from the appearance of the surrounding area. If restoration is to be accomplished, the Contractor must submit his restoration plan and receive approval from the County on his proposed procedures.

B. Omitted.

01560 – ENVIRONMENTAL REQUIREMENTS

C. Omitted

D. Restoration of Landscape Damage:

1. Do not allow any trees or other debris to get into the storm drainage system.

E. Spills: Prevent the spill of chemicals, fuels, oils, grease, bituminous materials, waste washings, herbicides, cement drainage or any other hazardous materials. Immediately report all spills to the Macon-Bibb County Fire Department, emergency number 911, giving name, telephone number, location of spill, and type and amount of material spilled. Notify the Engineer of the spill immediately following initial reporting to the Fire Department. Take containment action against any hazardous spills, which threaten storm drains and other environmental areas. Ensure clean up of materials spilled as a result of contractor action, or lack thereof. The contractor is responsible for the clean up of material(s) spilled. No spill residue shall be transported off site without specific approval from the Engineer. The contractor shall provide support, as appropriate, for containment and clean up of spills. If the spill exceeds reportable quantity limits, coordinate notification to the National Response Center with the local office of the Environmental Protection Division (EPD) through the Engineer.

3.04 AIR QUALITY:

A. Open burning operations must be approved by the Macon-Bibb County Fire Department and the Georgia Forestry Commission. Note that a burn ban is in effect from 1 May to 30 September of each year.

3.05 DUST CONTROL: Maintain all excavations, embankments, stockpiles, haul roads, permanent access roads, plant sites, waste areas, borrow areas, and all other work within or without the project boundaries free from dust which could cause a hazard or nuisance to others. Approved temporary methods of stabilization consisting of sprinkling, chemical treatment, light bituminous treatment or similar methods are permitted to control dust. To be approved, sprinkling must be repeated at such intervals as to keep all parts of the disturbed area damp at all times. If sprinkling is used, keep sufficient equipment on the job site at all times. Perform dust control as the work proceeds and whenever a dust nuisance or hazard occurs.

3.06 USING HAZARDOUS MATERIALS IN PERFORMING THE WORK:

A. Written Notification: Comply with all applicable federal, state, and local requirements concerning use of hazardous materials. Provide written notification to the Engineer when hazardous materials/chemicals are to be used or demolished. This must include the following information:

1. A list of each work activity/process required to use/demolish hazardous materials/chemicals.
2. A list of hazardous materials/chemicals used.
3. A Material Safety Data Sheet (MSDS) for each hazardous material/chemical used.
4. Written procedures for disposing of hazardous waste generated.
5. Omitted.
6. For additional hazardous material brought on site during the performance of the contract, the contractor shall provide an updated list and MSDS to the Engineer.

3.07 PESTICIDES (INSECTICIDES, FUNGICIDES, HERBICIDES, ETC.): Omitted

01560 – ENVIRONMENTAL REQUIREMENTS

3.09 THREATENED AND ENDANGERED SPECIES:

- A. The construction project is not anticipated to have any impact in this area since most plant and animal species of concern exist in wetlands. Any project activities believed to interface with threatened and endangered species shall be coordinated through the Engineer.

3.10 WETLANDS: Comply with water and land protection paragraphs of this Section to prevent construction site sediments and runoff from entering wetlands.

3.11 UNDERGROUND STORAGE TANKS (UST's): Not applicable

Section 1560 Submittals

<u>Para #</u>	<u>Description</u>	<u>Date Required</u>	<u>Inspector</u> <u>Check Mark</u>
1.04 A.2.a	Solid Waste Disposal Plan	at pre-construction conf.	_____

---- END OF NARRATIVE SECTION ----

PART 1 - GENERAL

1.01 CONTRACTOR OPERATIONS: This section establishes requirements to ensure the safety of Government and other personnel not directly or indirectly under the employment of the Contractor. Comply with standards maintained by Occupational Safety and Health Administration (OSHA), identified sections of Corps of Engineers Safety Manual (EM 385-1-1), and National Fire Protection Association (NFPA).

A. CONTRACTOR EMPLOYEES: Compliance with OSHA and other applicable laws and regulations for the protection of Contractor employees is the obligation of the Contractor. This contract is not intended in any way to require persons to work in surroundings or under working conditions that are unsafe or dangerous to their health.

B. Coordinate and perform work so as not to impact the safety of Government or non-Contractor personnel, or cause damage to government property. This requires providing appropriate safety devices to be utilized in and around the work areas to perform the job safely and protect others from hazards generated by the work.

1.02 SUBMITTALS:

A. General: Provide the following submittals in accordance with instructions found in Section 01300, Submittals and Contractor Furnished Items.

B. Material Submittals: None required under this section.

C. Other Submittals: Provide the following submittals as required by the contract or as directed by the Contracting Officer.

<u>Para #</u>	<u>Description</u>	<u>Date Required</u>	<u>Inspector Checklist</u>
3.01	Fire Reporting	If Fire	_____
3.07	Hazard Communication	Before Work	_____
3.9	Injury/Mishap Reports	By 1 hour after	_____

1.03 OSHA INSPECTIONS: Department of Labor (DOL) OSHA inspectors may arrive at Contractor work sites without formal notification in the event of an employee complaint or a no-notice inspection. The DOL has the right to stop or delay work and/or issue costly fines due to noncompliance with safety requirements. Any costs borne by such actions are the sole responsibility of the Contractor.

PART 2- PRODUCTS: Omitted

PART 3- EXECUTION

3.01 FIRE REPORTING: Report all fires as soon as discovered. The fire reporting number is 911. The caller should give his or her name and location of what is on fire. Also, give any other information that may be requested by the Fire Department dispatcher. Stay on the telephone until the dispatcher has obtained all necessary information.

3.02 OPERATIONS INVOLVING WELDING, CUTTING, BRAZING, AND OPEN FLAME are prohibited on this contract.

3.03 FIRE HYDRANTS/HOSES

- A. Fire hydrants shall not be used without prior approval of the Macon Water Authority. If permission is granted for use of a fire hydrant, the Contractor must furnish a gate valve to fit the 2 1/2" outlet and a proper hydrant wrench. Each time a hydrant is to be opened or used, it must be opened slowly to prevent a water surge, and it must be opened to the full "open" position. When closing the hydrant, close it slowly to prevent a water surge.
- B. The Fire Department will not loan equipment; e.g., fire hoses, nozzles, or hydrant wrenches.
- C. No vehicles or equipment shall be parked or stored within 15 feet of a fire hydrant.

3.04 DEBRIS

- A. The accumulation of all debris shall be kept to a minimum during construction.
- B. Piles of debris awaiting removal outside any facility shall not be placed in fire lanes or within 25 feet of the facility.
- C. Walkways, roadways and sidewalks shall be kept clear of building material, equipment, or other obstructions caused by the Contractor operation. Protective barriers and warning signs shall be installed.

3.05 FLAMMABLE AND COMBUSTIBLE LIQUIDS

- A. All flammable liquids shall be stored in suitable metal containers only.
- B. Store other flammable materials properly.
- C. Gasoline or any other low flash point flammable liquid shall not be used for cleaning purposes or to start fires.
- D. Static bonding wires shall be properly attached before combustible or flammable liquid is transferred from one vessel to another. This includes vehicles, portable gasoline driven equipment, etc.
- E. Smoking or the use of spark or flame producing equipment in areas where flammable liquids are being used or stored is strictly prohibited.

3.06 FIRE EXTINGUISHERS: The Contractor is responsible for providing an adequate number of fire extinguishers. Extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.

01580 - SAFETY REQUIREMENT

3.07 HAZARD COMMUNICATION: In any contract where hazardous materials are involved, the Contractor must comply with 29CFR 1910.1200, Hazard Communication. Contractors must provide the Engineer the Material Safety Data Sheets (MSDSs) for each chemical used at least 5 working days prior to start date. This includes, but is not limited to, all solvents, paints, adhesives, sealants, coatings, primers, mastics, etc. MSDSs must be the most current available.

3.8 CONFINED SPACE ENTRY: In recent years, there have been increased injuries and mishaps in confined spaces. The Contractor assumes full responsibility for performing all work in and around a confined space in a safe manner and IAW CFR 1910.146. Protect Macon-Bibb County personnel and the public by supplying barricades, warning signs, and traffic control measures as necessary.

3.9 INJURIES/MISHAP REPORTING: The Contractor shall report mishaps or incidents exceeding \$1,000 (material + labor) and all injuries requiring medical treatment to any personnel, including Contractor employees, within one (1) hour by phone to the Engineer during normal day shift hours. This report shall contain all available facts. Mishaps/Incidents occurring at other times of the day shall be reported as soon as possible the next normal workday.

3.10 MOTOR VEHICLES: No vehicle shall be stopped, parked, or left standing on any road or adjacent thereto or in any area in such a manner as to endanger the vehicle, other vehicles, equipment, or personnel using or passing that road or area. Roads shall be swept if spillage occurs during hauling. For chemical spills, see the Environmental Requirements section of the specifications. Ensure safe operating condition of all Contractor-owned vehicles. Unsafe and unserviceable vehicles shall be removed from service immediately. Ensure that all Subcontractors comply with these requirements.

3.11 EXCAVATIONS: In all excavations where any personnel may be exposed to danger from moving ground, protection shall be provided by means of a shoring system, sloping of the ground, or some other equivalent means. All trenches over five feet deep in either hard and compact or soft and unstable soil shall be sloped, shored, sheeted braced or otherwise supported. Trenches less than five feet in depth shall also be effectively protected when hazardous ground movement may be expected. Additional information/requirements may be found in 29 CFR 1926 and EM 385-1-1.

3.12 PROTECTIVE BARRIERS/WARNING SIGNS: When it is necessary to barricade an area for excavation, open manholes, overhead work, or the protection of personnel from hazardous operations, moving equipment or cranes, barricades are to be provided by the Contractor. Barricades must be erected before the work begins. If the barricades are in a roadway or walkway, blinking lights must be used during the hours of darkness. Barricades and associated equipment shall be kept neat and orderly at all times. When the work is complete, the barricades must be removed immediately from the job site. Kerosene lamps and open flame pots shall not be used for or with warning signs or devices. Additional information/requirements may be found in 29 CFR 1926 and EM 385-1-1. Provide as required safety signs at job sites, such as MEN WORKING ABOVE, DO NOT WATCH WELDER, and NO SMOKING.

3.13 PROTECTIVE EQUIPMENT: The Contractor is responsible for the use of appropriate personal protective equipment by his and subcontractor employees and guests. The Government recommends voluntary use of the standards in EM 385-1-1.

3.14 TOOLS AND EQUIPMENT

A. LADDERS/SCAFFOLDS: Use standard ladders that are structurally rigid, sound, equipped with approved safety shoes, and free of cracks. Metal ladders shall not be used near or for electric service. All ladders shall be tied off at the top and bottom as necessary. Special purpose job ladders may be constructed if they are properly designed and built IAW 29 CFR 1926. Scaffolds and platforms shall have handrails and toe boards. Additional information/requirements may be found in EM 385-1-1.

B. HAND TOOLS/ELECTRICAL TOOLS, PNEUMATIC TOOLS/COMPRESSED AIR: The Contractor is responsible for ensuring that all hand tools used by his or subcontractor personnel are used IAW applicable safety standards, especially 29 CFR 1910 and 1926.

C. ELECTRICAL WIRING AND EQUIPMENT: All electrical wiring and equipment shall be a type listed by UL or another recognized listing agent. All temporary electrical wiring shall be adequately installed and placed to avoid physical damage from other operations and comply with 29 CFR 1926.405. Temporary wiring shall be removed immediately upon completion of construction or the purpose for which the wiring was installed. All extension cords shall be of the three-wire type and kept in a good state of repair. Splices shall be avoided, but if they are made, they must comply with 29 CFR 1926.405. All portable electrical appliances and equipment shall be unplugged at the end of each workday.

<<<<< END OF SECTION >>>>>

SECTION 2100: MILLING, HOT MIX ASPHALT:

A. Milling

1. Materials:

a. Delivery, Storage, and Handling

When specified, stockpile the milled material at locations shown on the drawings or as directed by the engineer

1. Uniformly stockpile the materials approximately 6 – 8ft high.
2. Maintain the existing drainage pattern of water from the stockpile storage area.
3. Dress the reclaimed asphalt area to drain rainwater from the material.
4. Obtain the Engineer's approval of the stockpile locations and the method used to prevent milled material degradation, segregation, and reconsolidation.

2. Equipment:

a. Milling Equipment

Use power-driven, self-propelled milling equipment that is the size and shape that allows traffic to pass through areas adjacent to the work. Also, use equipment that is:

1. Designed to mill and remove a specified depth of existing asphalt paving
2. Equipment with grade and slope controls that will provide accurate control of the milling operation
3. Capable of removing pavement to an accuracy of 1/8 in.
4. Provided with conveyors capable of side, rear, or front loading to transfer the milled material from the roadway to a truck.

3. Dust Control:

Provide power brooms, vacuum, power blowers, or other means to remove loose debris or dust. Do not allow dust control to restrict visibility of passing traffic or to disrupt adjacent property owners.

4. Milling Operations:

Follow the drawings or statement of work to mill the designated areas and Depths including bridge decks, shoulders, and ramps, as required.

Ensure the following requirements are met:

- a. Schedule the construction operation. Use milling methods that will produce a uniform finished surface and maintain a constant cross slope between extremities in each lane.
- b. Provide positive drainage to prevent water accumulation on the milled pavement, as shown on the Plans or directed by the Engineer.
- c. Bevel back the longitudinal vertical edges greater than 2 in that are produced by the removal process and left exposed to traffic. Bevel them back at least 3 in for each 2 in of material removed. Use an attached method.
- d. When removing material at ramp areas and ends of milled sections, taper the transverse edges 10 ft to avoid creating a traffic hazard and to produce a smooth surface.
- e. Protect with a temporary asphaltic concrete tie-in (paper joint) vertical edges at other areas such as bridge approach slabs, drainage structures, and utility appurtenance greater than ½ in that are left open to transversing vehicles. Place the temporary tie-in at taper rate of at least 6 to 1 horizontal to vertical distance.
- f. Remove dust, residue, and loose milled material from the milled surface. Do not allow traffic on the milled surface and do not place asphaltic concrete on the milled surface until removal is complete. The reclaimed asphaltic pavement becomes the Contractor's property unless otherwise specified.
- g. Mill the existing pavement so that a smooth surface results that will accommodate a 1.5" asphalt overlay.

5. Quality Acceptance:

Ensure that the milling operation produce a uniform pavement texture that is true to line, grade, and cross section.

Milled pavement surface acceptance testing will be performed using a visual inspection.

Milled pavement will be evaluated on individual test sections.

Milled pavement surfaces are subject to visual and straightedge inspection.

Keep a 10 ft straightedge near the milling operation to measure surface irregularities of the milled pavement surface.

Re-mill irregularities greater than 1/8 in per 10 ft at no additional cost to Bibb County.

Ensure that the cross slope is uniform and that no depressions or slope misalignments greater than 1/4 in per 12 ft exist when the slope is tested with a straightedge placed perpendicular to center line.

C. Hot Mix Asphaltic Concrete Construction: (Resurfacing)

1. General Description

The work includes constructing one or more courses of bituminous plant mixture on the prepared foundation or existing roadway surface. The mixture shall conform with lines, grades, thickness, and typical cross sections shown on the drawings or in the statement of work established by the engineer.

This section includes the requirements for all bituminous plant mixture regardless of the gradation of the aggregates, type and amount of bituminous material, or pavement use.

2. Preparation

Prepare the existing surface as follows:

Clean the existing surface to the Engineer's satisfaction before applying

hot mix asphalt pavement.

3. Place Patching and Leveling Course

- a. When the existing surface is irregular, bring it to the proper cross section and grade with a leveling course of hot mix asphaltic concrete materials.
- b. Use leveling at the same Superpave Mix Design Level specified for the surface course except when leveling is no greater than 0.75 inch. Use 4.75mm Superpave Mix for any application with a depth of less than 0.75 inch.
- c. Place leveling at the locations and in the amounts directed by the Engineer.
- d. Bibb County mandates the use of 9mm “Superpave” Hot Mix Asphalt in all resurfacing projects with a depth of 1.25”.

4. Construction

Provide the Engineering at least one day’s notice prior to beginning construction, or prior to resuming production if operations have been temporarily suspended.

5. Observe Weather Condition Limitations

Do not mix and place asphaltic concrete if the existing surface is wet or frozen. Do not lay asphaltic concrete at air temperature below 55F. For other courses, follow the temperature guidelines in the following table:

Table4-Lift Thickness Table

Lift Thickness	Minimum Temperature
1 in (25 mm) or less	55 F (13 C)
1.1 to 2 in (26 mm to 50 mm)	45 F (8 C)
2.1 to 3 in (51 mm to 75 mm)	35 F (2 C)

3.1 to 4 in (76 mm to 100 mm)	30 F (0 C)
4.1 to 8 in (101 mm to 200 mm)	Contractor's discretion

6. Perform Spreading and Finishing

- a. 9 mm "Superpave" hot mix asphalt is to be spread and finished to a mat thickness of 1.25".
- b. Unload the mixture into the paver hopper or into a device designed to receive the mixture from delivery vehicles.
- c. Except for leveling courses, spread the mixture to the loose depth for the compacted thickness or the spread rate, Use a mechanical spreader true to the line, grade, and cross section specified.
- d. Obtain the Engineer's approval for the sequence of paving operations, including paving the adjoining lanes. Minimize tracking tack onto surrounding surfaces.
- e. Ensure that the outside edges of the pavement being laid are aligned and parallel to the roadway center line.
- f. Where mechanical equipment cannot be used, spread and rake the mixture by hand. Obtain the Engineer's approval of the operation sequence, including compactive methods, in these areas.
- g. Keep small hand raking tools clean and free from asphalt build-up. Do not use fuel oil or other harmful solvents to clean tools during the work.
- h. Do not use mixture with any of these characteristics:
 - Segregated
 - Nonconforming temperature
 - Deficient or excessive asphalt cement content
 - Otherwise unsuitable to place on the roadway in the work
- i. Remove and replace mixture placed on the roadway that the Engineer determines has unacceptable blemish levels from segregation, streaking, pulling and tearing, or other characteristics.

Replace with acceptable mixture at the Contractor's expense. Do not continually place mixtures with deficiencies.

Do not place subsequent course lifts over another lift or course placed on the same day while the temperature of the previously placed mix is 140 F or greater.

j. Obtain the Engineer's approval of the material compaction equipment. Perform the rolling as follows:

1. Begin the rolling as close behind the spreader as possible without causing excessive distortion of the asphalt surface.
2. Continue rolling until roller marks are no longer visible.

k. If applicable, taper or "feather" asphalt from full depth to a depth no greater than 0.5 in long curbs, gutters, raised pavement edges, and areas where drainage characteristics of the road must be retained. The Engineer will determine the location and extent of tapering.

7. Maintain Continuity of Operations

Coordinate plant production, transportation and paving operations to maintain a continuous operation. If the spreading operations are interrupted, construct a transverse joint if the mixture immediately behind the paver screed cools to less than 250 F.

8. Construct the Asphalt Joints

a. Construct Asphalt Joints:

1. Construct asphalt joints to facilitate full depth exposure of the course before resuming placement of the affected course.
2. Properly clean and tack the vertical face of the transverse joint before placing additional material.
3. Straightedge asphalt joints immediately after forming the joint.
4. Immediately correct any irregularity that exceeds 3/16 in. in 10 ft.
5. Never burn or heat the joint by applying fuel oil or other volatile materials.

9. Protect the Pavement

Protect sections of the newly finished pavement from traffic until the traffic will not mar the surface or alter the surface texture. If directed by the Engineer, use artificial methods to cool the newly finished pavement to open the pavement to traffic more quickly.

10. Testing

The Hot Mix Asphalt that is used in any resurfacing project is subject to random geotechnical testing. The contractor will be required to submit 5 grab samples of hot mix asphalt as it is delivered to the project site. These samples will be tested for gradation and AC content. The contractor must use a certified commercial testing laboratory as directed by the engineer. The engineer will determine when these tests are to be performed. The contractor shall forward the results of random testing to the engineer within 14 days of sampling. Furthermore, a mix design shall be submitted to the engineer 14 calendar days prior to the overlay being applied.

11. Segregated Mixture

If the mixture is segregated in the finished mat, the Department will take actions based on the degree of segregation. The actions are described below.

Unquestionably Unacceptable Segregation:

When the Engineer determines that the segregation in the finished mat is unquestionable unacceptable, following these measures:

1. Suspend Work and require the Contractor to take positive corrective action. The Engineer will evaluate the segregated areas to determine the extent of the corrective work to complete.
2. If there is a mechanical failure that results in a petroleum spill onto the hot mix asphalt mat then production must cease until the necessary mechanical repairs have been made to the equipment and the areas of the mat that have been affected by the spill have been removed and replaced.

12. Measurement

A. Milling

Milling existing asphalt pavement is measured by square yards.

C. Hot Mix Asphalt

Hot mix asphaltic concrete, complete in place and accepted, is measured in tons. Since payments will be by the ton of asphalt used, the contractor shall provide a copy of the asphalt load tickets to the inspector at the time of delivery. Tack coat will be measured by the gallon.

13. Striping

Striping and repairing damaged traffic loops will be performed by the Macon-Bibb workforce.